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E9*117R02/14*1145*04

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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1145*04**

Nº de extensión / *Extension No.*: **04**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23071167

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : Si / Yes |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : LH688 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; XCENT; AVENTUS
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 75 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 75 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.01 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5:1.01 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5.64 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 5.64 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CN17110405; CN18070375; CN19070754; CN21090767; **CN23071167**
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 28/11/2017; 19/07/2018; 29/07/2019; 28/09/2021; **21/08/2023**
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23071167 / *See Test Report Number CN23071167*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23071167****REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN IV
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION IV**

Solicitante / *Applicant* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)

Fabricante / *Manufacturer* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)

Clase del neumático / *Tyre Class* : C3

Categoría de uso / *Category of use* : Normal / *Normal*

Neumático de tracción / *Traction tyre* : Sí / *Yes*

Designación de tipo de neumático / *Tyre type designation* : LH688

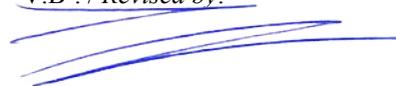
Marca / *Brand name* : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT; AVENTUS**

Nombre comercial / *Commercial name* : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**

Lugar y fecha de emisión del informe / *Place and date of issue* : L'Albornar, Santa Oliva (Tarragona), 21/08/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / *Performed by:*Zhu Yuan
HOMOLOGATION ENGINEERV.B° / *Revised by:*Josep Masip Gomez
DEPARTMENT MANAGER



INFORME/REPORT Nº CN23071167

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/70R22.5 154/151L (mayor ancho de sección, relación de aspecto más baja / *widest section width, lowest aspect ratio*).
Ver Anexo 1, Informe CN23070659, IDIADA, 17/08/2023
See Annex 1, Test report CN23070659, IDIADA, 17/08/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 295/80R22.5 152/149L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN16120066, IDIADA, 08/11/2016
See Annex 2, Test report CN16120066, IDIADA, 08/11/2016
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 295/80R22.5 152/149L (cumple el nuevo valor límite calculado / *meets new calculated limit value*)
Ver Anexo 3, Informe CN16110065, IDIADA, 27/10/2016
See Annex 3, Test report CN16110065, IDIADA, 27/10/2016
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extensión (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas marcas / *Addition of new brand names*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
 - Exclusión de marcas / *Deletion of brand names*
 - Exclusión de nombres comerciales / *Deletion of trade descriptions*
 - Actualización del número de suplemento reglamentario / *Upgrade of the regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 21/08/2023



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*
 * EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANNEX 1

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167





REPORT No. CN23070659

UN REGULATION No. 117R02/14 RELATED TO ROLLING SOUND EMISSIONS

Applicant : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China

Manufacturer : WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD.
Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)

Tyre class : C3

Category of use : Normal

Tyre for use in severe snow conditions : No

Traction tyre : Yes

Brand name / Trade mark : FIREMAX

Trade description/ Commercial name : FM08

Tyre size : 315/70R22.5 154/151L

Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 17/08/2023

CONCLUSIONS: The samples of the family have been tested according to the technical prescriptions with regard to "rolling sound emissions level" pursuant to UN Regulation No. 117R02/14. The characteristics of the tested samples are detailed in the annex to the test report.

Performed by:

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



ANNEX TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23070659

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Normal
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: Yes
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM08
1.1.9	Tyre size	: 315/70R22.5 154/151L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 154 / 3,750
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 2723, 2TWLJLA31
1.1.13	Reference inflation pressure P _r [kPa]	: 930

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2694

Validate this report with the security code «30X4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23070659



* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$633.41 \leq 640.00 \leq 696.75$
Front axle right wheel	$599.72 \leq 600.00 \leq 659.69$
Rear axle left wheel	$639.73 \leq 640.00 \leq 703.71$
Rear axle right wheel	$651.84 \leq 660.00 \leq 717.02$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2308/02276-01	CN-2308/02276-02

Rear left	Rear right
CN-2308/02276-03	CN-2308/02276-04

1.1.16 Test rim : 9.00 x 22.5

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02745-01	CN-1912/02745-02

Rear left	Rear right
CN-1912/02745-03	CN-1912/02745-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	2,758	$50 < 73.55 < 90$
Front axle right wheel	2,640	$50 < 70.40 < 90$
Rear axle left wheel	2,780	$50 < 74.13 < 90$
Rear axle right wheel	2,822	$50 < 75.25 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 73.33 \leq 80$

FULFILS / NOT FULFILS

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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)

**1.2. Test vehicle**

1.2.1	Trade name	: HYUNDAI
1.2.2	Model	: XCIENT
1.2.3	Year	: 2019
1.2.4	Transmission	: Manual
1.2.5	Wheelbase [mm]	: 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

1.2.6	Vehicle internal reference	: CN-2001/01800
-------	----------------------------	-----------------

1.3. Test equipment

1.3.1	Sound level meter 1	: 193663
1.3.2	Sound level meter 2	: 193664
1.3.3	Manometer	: 193661
1.3.4	Weight scale	: 184618
1.3.5	Track temperature measurement device	: 182330
1.3.6	Wind speed measurement device	: 193666
1.3.7	Speed measurement device	: 035816
1.3.8	Ambient temperature measurement device	: 193659



2. TEST TRACK

2.1. Environment

2.1.1 Air temperature T_a [°C] : 30.4
 $5.0 < T_a < 40.0$

FULFILS / NOT FULFILS

2.1.2. Test surface temperature T_s [°C] : 37.0
 $5.0 \leq T_s \leq 50.0$

FULFILS / NOT FULFILS

2.1.3 Wind speed [m/s] : 3.9
 Less than 5 m/s

FULFILS / NOT FULFILS

2.1.4 Ambient noise [dB(A)] : 35.5
 Test result – Ambient noise ≥ 10 dB(A)

FULFILS / NOT FULFILS

2.1.5 Wind direction [°] : 125.0

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 6th 2023
- Issued by : IDIADA



3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	62.2	S → N	75.3	76.3	30.2	34.8	75.3	76.3
2	64.9	S → N	76.2	77.0	30.2	34.9	76.2	77.0
3	66.9	N → S	76.6	76.9	30.3	36.8	76.6	76.9
4	68.3	S → N	76.6	77.2	30.4	36.6	76.6	77.2
5	71.8	N → S	76.8	77.4	30.4	37.4	76.8	77.4
6	74.3	S → N	76.8	77.6	30.3	37.8	76.8	77.6
7	75.6	N → S	77.2	77.8	30.4	38.2	77.2	77.8
8	77.8	N → S	77.4	78.3	30.6	39.4	77.4	78.3

- 3.1. Regression line slope : 17.37
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 76.95
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2594

Validate this report with the security code «30X4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23070467

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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 16/08/2023

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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ANNEX 2

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CN23071167

IDIADA

**REPORT N° CN16120066**

UN/ECE REGULATION 117R02 RELATED TO ADHESION ON WET SURFACES

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECCESS

Commercial description : SFC08

Category of use : Normal

Tyre class : C3

Tyre size : 295/80R22.5 152/149L

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 08/11/2016

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “adhesion performance on wet surfaces” pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested samples are detailed in the annex to the test report.
Test configuration as per ISO 15222: *Configuration 1 (4 candidate tyres in test vehicle)*

Performed by:

Frank Yu
TEST ENGINEER

Revised by:

Lluís Sans Gomis
DEPARTMENT MANAGER



**ANNEX TO THE TEST REPORT
ADHESION ON WET SURFACES**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3,550
- 1.1.10 Reference pressure [kPa] : 900
- 1.1.11 Test tyre internal reference :

Front left	Front right
CN16120066-1	CN16120066-2

Rear left	Rear right
CN16120066-3	CN16120066-4

- 1.1.12 Test rim : 9.00 x 22.5
- 1.1.13 Test rim internal reference :

Front left	Front right
G-B227	G-B225

Rear left	Rear right
G-B226	G-B228

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1.1.14 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 SRTT internal reference :

Front left	Front right
BW-FG-031	BW-FG-032

Rear left	Rear right
BW-FG-030	BW-FG-033

1.1.16 Test SRTT rim : 9.00 x 22.5

1.1.17 Test SRTT rim internal reference :

Front left	Front right
G-B229	G-B230

Rear left	Rear right
G-B231	G-B232

1.1.18 Test tyre load [kg] :

SRTT1			Candidate			SRTT2		
FL	2,994	79.8% Qr	FL	2,988	84.2% Qr	FL	3,002	80.1% Qr
FR	2,824	75.3% Qr	FR	2,858	80.5% Qr	FR	2,840	75.7% Qr
RL	2,818	75.1% Qr	RL	2,828	79.7% Qr	RL	2,818	75.1% Qr
RR	2,876	76.7% Qr	RR	2,878	81.1% Qr	RR	2,878	76.7% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

FULFILS / NOT FULFILS

1.2. Test vehicle

1.2.1 Trade name : SITRAK

1.2.2 Model : C7H400

1.2.3 Year : 2015

1.2.4 Transmission : Manual

1.2.5 Wheelbase [mm] : 3,600

1.2.6 Vehicle internal reference : SB-G-110

1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

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1.3. Test inflation pressure

1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	679	631	630	646
SRTT 2	682	636	630	646

1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	2,988	3,550	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	2	726
FR	2,858	3,550		2	686
RL	2,828	3,550	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	2	677
RR	2,878	3,550		2	692

1.4. Test equipment

- 1.4.1 Manometer : PCL DAC1C08C
- 1.4.2 Weight scale : SB-G-070
- 1.4.3 Thermometer : G-B029
- 1.4.4 Track temperature measurement device : G-B030
- 1.4.5 Speed measurement device : SB-G-109
- 1.4.6 Force pedal : SB-G-11

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2. TEST TRACK

2.1. Location : ABS Surface, CATARC Yancheng

2.2. Date of check on compliance of the test surface: July 3rd 2015

2.3. Test track characteristics:

2.3.1 Sand depth [mm] : 0.98

2.3.2 BPN : 58.0

2.3.3 Water depth [mm] : Between 0.50 and 1.50

2.4. Test method : Vehicle

2.5. Air temperature T_a [°C] : 19.7

2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT1	Candidate	SRTT2
19.5	18.8	18.4

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS

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3. TEST RESULTS

Test run	SRTT 1		Candidate		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	23.02	5.36	22.70	5.44	22.57	5.47
2	23.02	5.36	23.10	5.34	22.87	5.40
3	22.55	5.47	22.54	5.48	22.44	5.50
4	-	-	21.72	5.68	-	-
5	-	-	22.39	5.51	-	-
6	-	-	22.80	5.41	-	-

Coefficient of variation

SRTT 1	Candidate Tyre	SRTT 2
1.20	2.11	0.97
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	N - S	315/70R22.5	---	5.40 m/s ²	---	> 600
3	60 - 20	N - S	---	295/80R22.5	5.48 m/s ²	1.01	> 600
4	60 - 20	N - S	315/70R22.5	---	5.46 m/s ²	---	> 600

Wet grip index G = 1.01

Wet grip index (Worst case) ≥ 0.80

Wet grip index (Any size) ≥ 0.88

FULFILS / NOT FULFILS

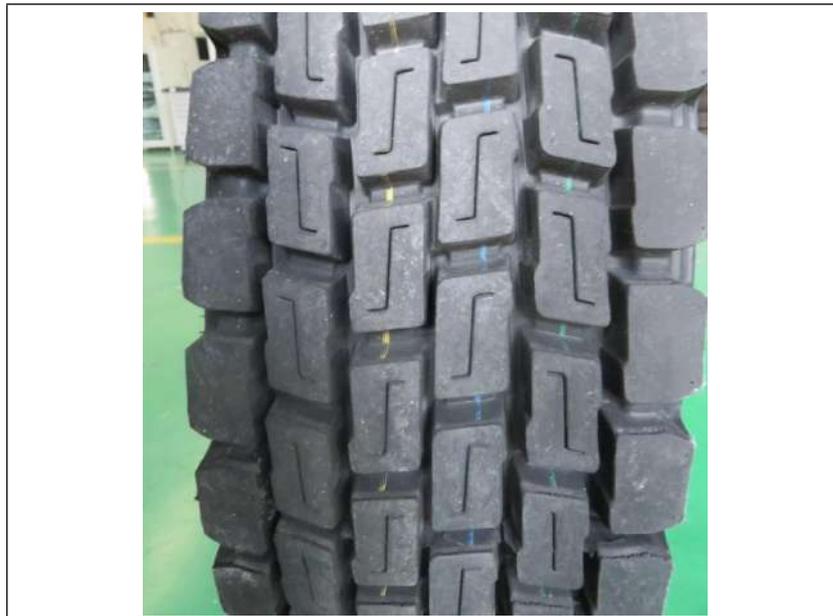
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4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Yancheng, China

Date of test: 08/11/2016

Frank Yu
TEST ENGINEER



ANNEX 3

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167

IDIADA

**REPORT N° CN16110065**

UN/ECE REGULATION 117R02 RELATED TO ROLLING RESISTANCE

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECESS

Commercial description : SFC08

Tyre Class : C3

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 27/10/2016

CONCLUSIONS: The tested sample of the family FULFILS the technical prescriptions with regard to "rolling resistance" pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested sample are detailed in the annex to the test report.

Performed by:

Revised by:

Frank Yu
TEST ENGINEERLluís Sans Gomis
DEPARTMENT MANAGER



**ANNEX TO THE TEST REPORT
UN/ECE REGULATION 117R02**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jiangnan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre Class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3550
- 1.1.10 Inflation pressure [kPa] : 900
- 1.1.11 Test tyre internal reference : 16-499
- 1.1.12 Test rim : 9.00 x 22.5"
- 1.1.13 Test rim internal reference : CTQI-01
- 1.1.14 Test rim material : Steel

1.2. Test machine data

- 1.2.1 Identification : B1037
- 1.2.2 Drum diameter [mm] : 1707.6
- 1.2.3 Surface : Smooth steel
- 1.2.4 Roughness [μm] : ≤ 6.3

FULFILS/NOT FULFILS

FULFILS/NOT FULFILS

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1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121)

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 152 / 3550

1.3.4 Test load [kg / N] : 3,017.5 / 29,591.6

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

FULFILS/NOT FULFILS

1.3.5 Test inflation pressure, initial [kPa] : 900

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

FULFILS/NOT FULFILS

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.498

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.528

1.3.8 Ambient temperature T_{am} [°C] : 23.44

$20.0 \leq T_{am} \leq 30.0$

FULFILS/NOT FULFILS

1.3.9 Skim test load [N] : 397.51

$C3 \leq 500$ N

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 117.71

1.3.11 Spindle force during skim test (Ft) [N] : 7.86

1.3.12 Parasitic loss (Fpl) [N] : 12.72

1.3.13 Rolling resistance (Fr) [N] : 173.69

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2. TEST RESULTS

- 2.1. Rolling resistance coefficient
- 2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.87
- 2.1.2 Temperature corrected value [N/kN] : 5.81
- 2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.64

Rolling resistance coefficient C_r [N/kN] = 5.64

2.2. Limit value for the Class C3 tyre (Stage 2): 6.5 N/kN

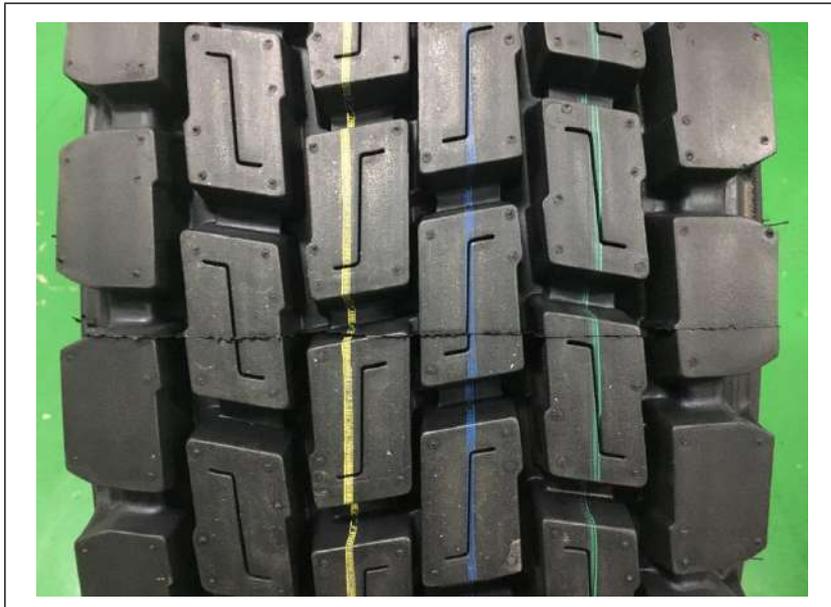
FULFILS / ~~NOT FULFILS~~



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Beijing, China

Date of test: 19/10/2016

Frank Yu
TEST ENGINEER

TECHNICAL DOCUMENTATION

Type of tyre:

LH688



Date : Aug 19, 2023

Ext. : 04

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT; AVENTUS**
 - 1.5. Trade description(s)/Commercial name(s) : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
 - 1.6. Type of tyre : LH688
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to Attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
 - 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

to in paragraph 4.

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT**; **AVENTUS**

Trade description(s)/Commercial name(s):

LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969**; **VDR530**

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound Db(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/Kn of Stage II	Limit for Snow grip index
1	E9-00.1005	11R22.5 146/143L	N.A.	75	0.65	6.5	N.A.
2	E9-00.6171	11R22.5 149/146L	N.A.	75	0.65	6.5	N.A.
3	<u>E9-00.1102</u>	<u>11R22.5 146/143M</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
4	E9-00.1006	12R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
5	E9-00.1008	295/80R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
6	E9-00.1009	315/80R22.5 154/151L	N.A.	75	0.65	6.5	N.A.
7	E9-00.1067	315/80R22.5 156/153L	N.A.	75	0.65	6.5	N.A.
8	<u>E9-00.6588</u>	<u>315/70R22.5 154/151L</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
9							
10							
11							
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13							
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17							
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20							

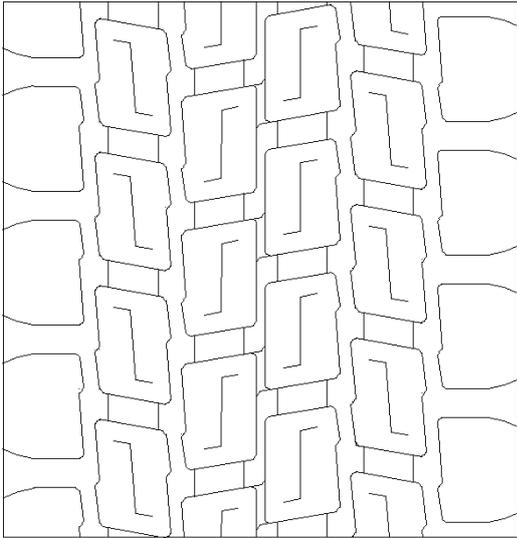
CN23071167

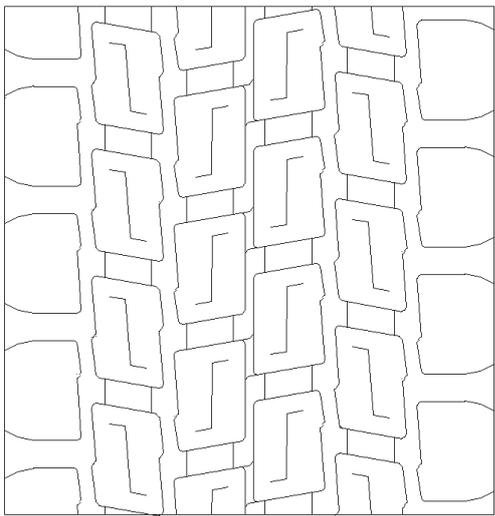
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Worst Case Selection

Test size for rolling sound	:	315/70R22.5 154/151L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	295/80R22.5 152/149L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.715 < 1.01$ (Wet grip test result)
Test size for rolling resistance	:	295/80R22.5 152/149L
Because of	:	Lowest load index; or Calculated limit value = $(RRC\text{-limit value } R117 - 0.3\#N/kN) - 0.06 * x$ (LI-candidate - LI-lowest) The new limit value is $5.84 > 5.64$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

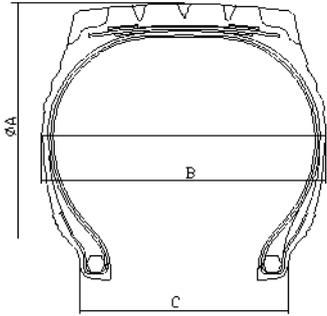
Attachment-2 Details of the major features

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 315/70R22.5 154/151L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 6.5
Depth: center groove [mm]	: 19.0
Depth: shoulder groove [mm]	: 19.0
Tyre mass [kg]	53.5
Tread depth [mm]	19.0
Tread width [mm]	248
Curvature radius of tread crown [mm]	965
Tyre outer diameter[mm]	1014
Tread plies	4STEEL
Tyre tread pattern	 49 BLOCKS

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 295/80R22.5 152/149L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 4.0
Depth: center groove [mm]	: 18.0
Depth: shoulder groove [mm]	: 18.0
Tyre mass [kg]	53.0
Tread depth [mm]	18.0
Tread width [mm]	224
Curvature radius of tread crown [mm]	697
Tyre outer diameter[mm]	1044
Tread plies	1STEEL+3STEEL
Tyre tread pattern	 <p>51 BLOCKS</p>

Attachment 3 Drawings or photographs of the tyre sidewall

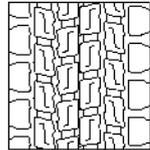
Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



LOWER MOLD



UPPER MOLD



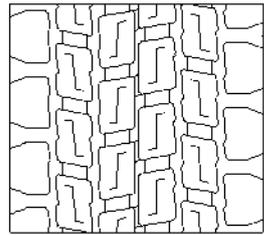
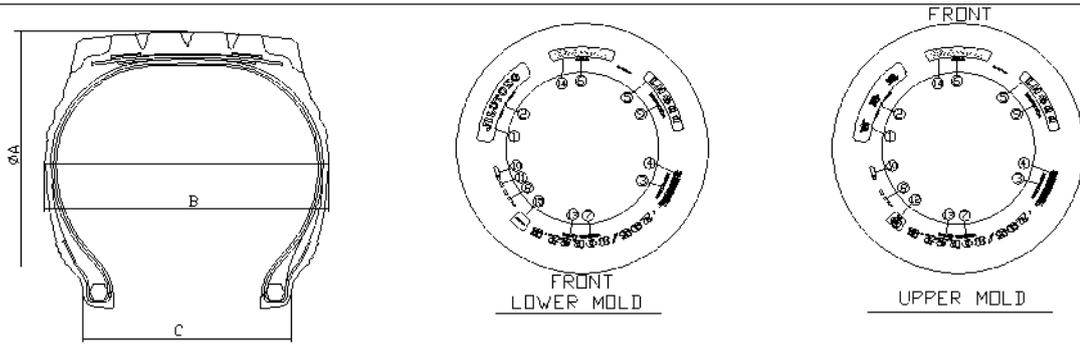
49 BLOCKS

LH688 , SFC08 , FM08
KTR67 , SDR530 , ECD08
H801 , VDR530 , EL969

15	TRACTION
14	PLIES SIDEWALL 1 STEEL TREAD 4 STEEL
14	MAX LOAD SINGLE 3750kg (8270 LBS) AT 930 kpa (135 PSI) COLD
14	MAX LOAD DUAL 3450kg (7610 LBS) AT 930 kpa (135 PSI) COLD
13	STANDARD RIM 9.00
12	CCC
11	DATE CODE XXXX
10	Ⓜ XXXXXX
9	315/70R22.5 154/151L
8	DOT XXXXXXXX
7	TUBE LESS
6	ALL STEEL RADIAL
5	TREAD DESCRIPTION
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/70R22.5 20PR	JILUTONG , SAFECESS , FIREMAX KPATOS , SUNWIDE , ECOSTAR HUNTERROAD , AVENTUS , XCENT	LH688 , SFC08 , FM08 KTR67 , SDR530 , ECD08 H801 , VDR530 , EL969	154/151	L	T/L	1014	312	228.6	19.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



51 BLOCKS

LH688, SFC08, FM08, KTR67
TG108, FL08, DD626, AK97
H801, ECC08, SDR530

15	TRACTION
14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 3500kg (7900 LBS) AT 300 kpa (4.30 PSI) COLD MAX LOAD DUPL 3200kg (7050 LBS) AT 300 kpa (4.30 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	Ⓔ XXXXXX
9	295/80R22.5 152/149L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

295/80R22.5 18PR	JILUTONG, SAFECESS, FIREMAX KPATOS, TRANSKING, FIRELION DDYKING, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH688, SFC08, FM08 KTR67, TG108, FL08 DD626, AK97, H801 ECC08, SDR530	152/149	L	T/L	1044	298	228.6	22
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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E9*117R02/14*1092*06

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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1092*06**

Nº de extensión / *Extension No.*: **06**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23020659

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH668 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING;
TRANSKING; SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN;
HUNTERROAD; ECOSTAR
- 6.2. Denominación(es) comercial(es) / Trade
description(s)/commercial name(s) of the type of tyre : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101;
CL101; H701; ECO18; SMX300
7. Servicio técnico autorizado a efectos de homologación o
comprobación de los ensayos de conformidad/
Technical service approved for purposes of approval or of
verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de
resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ /
Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage
1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo
en el Apéndice 1 del Anexo 3: 73 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the
representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to
Annex 3: 73 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este
Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,20 (G) mediante el método
de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this
Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.20 (G) using the vehicle or trailer ⁽²⁾
method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento,
de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 6,19 N/kN / Rolling resistance level
of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix
1 to Annex 6: 6.19 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num.
117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en
nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow
performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the
test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction
method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method. ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / : CV15100481; CV16100663; CN17050370;
Number of report issued by the Technical Service : CV18070697; CV18080073; CN19070753;
CN21090766; CN23020659
10. Fecha del informe emitido por este Servicio / : 02/11/2015; 20/10/2016; 26/05/2017; 24/07/2018;
Date of report issued by that service : 02/08/2018; 29/07/2019; 28/09/2021; 15/02/2023
11. Motivo(s) de la extensión (en su caso) / : Ver informe de ensayo número CN23020659 / See
Reason(s) of extension (if applicable) : Test Report Number CN23020659
12. Observaciones / : N/A
Any remarks
13. Lugar / : Madrid
Place
14. Fecha / : Ver firma electrónica /
Date : See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación /Annexed to this communication are:
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020659**

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN VI
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION VI

Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Clase del neumático / Tyre Class : C3
Categoría de uso / Category of use : Normal / Normal

Neumático de tracción / Traction tyre : No / No

Designación de tipo de neumático /
Tyre type designation : LH668

Marca / Brand name : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; HUNTERROAD;
ECOSTAR

Nombre comercial / Commercial name : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101; CL101;
H701; ECO18; SMX300

Lugar y fecha de emisión del informe /
Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.Bº / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020659

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 13R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15070679, IDIADA, 10/08/2015
See Annex 1, Test report CV15070679, IDIADA, 10/08/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 9.00R20 144/142L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15100879, IDIADA, 08/08/2015
See Annex 2, Test report CV15100879, IDIADA, 08/08/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 7.00R16LT 118/114L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CV15090243, IDIADA, 22/09/2015
See Annex 3, Test report CV15090243, IDIADA, 22/09/2015
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2022



Zhu Yuan
HOMOLOGATION ENGINEER

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ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15070679 / ROLLING SOUND EMISSIONS CV15070679

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG118
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 13R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	565,22 ≤ 590,00 ≤ 621,74
Rueda derecha del eje delantero / Front axle right wheel	567,42 ≤ 590,00 ≤ 624,16
Rueda izquierda del eje trasero / Rear axle left wheel	623,57 ≤ 650,00 ≤ 685,93
Rueda derecha del eje trasero / Rear axle right wheel	632,57 ≤ 660,00 ≤ 695,83

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IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1507/511	HVI-1507/512

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1507/513	HVI-1507/514

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1205/675	HVI-1205/676

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/677	HVI-1205/678

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2.886	50 < 72,15 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2.895	50 < 72,38 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.122	50 < 78,05 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.158	50 < 78,95 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 75,38 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

- 1.2.6 Referencia interna del vehículo /
Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 140070
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto /
Track temperature measurement device : 141537
- 1.3.6 Anemómetro /
Wind speed measurement device : 150095
- 1.3.7 Velocímetro /
Speed measurement device : 109547
- 1.3.8 Termómetro de la temperatura ambiente /
Ambient temperature measurement device : 10004

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 30,9
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2 Temperatura de la superficie de ensayo [°C]: 48,6
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 1,9
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 42,1
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Presión barométrica [kPa] / : 100,19
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 58,15
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 176,0
Wind direction [°]

2.2. Fecha de ensayo y método de verificación según ISO 10844:2011 /

Date and method of check on compliance of the test surface with ISO 10844:2011:

- 25 de mayo de 2015 / *May 25th 2015*

- Emitido por / *Issued by* : IDIADA

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,5	W → E	72,5	72,9	30,4	48,5	72,5	72,9
2	64,7	W → E	73,8	73,8	30,7	48,5	73,8	73,8
3	66,6	W → E	73,6	74,0	31,5	48,5	73,6	74,0
4	68,8	W → E	74,6	74,5	31,0	48,6	74,6	74,5
5	72,6	W → E	75,1	75,3	30,8	48,6	75,1	75,3
6	74,5	W → E	75,4	75,5	30,9	48,6	75,4	75,5
7	76,8	W → E	76,5	76,4	30,8	48,7	76,5	76,4
8	78,4	W → E	77,2	76,7	30,8	48,6	77,2	76,7

- 3.1.** Pendiente de la recta de regresión / : 39,15
Regression line slope
- 3.2.** Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 74,8
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3.** Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 73
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4.** Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) / : 73 dB (A)
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO CUMPLE
 FULFILS / NOT FULFILS

Lugar de ensayo / Place of test: L'Albornar (Santa Oliva)

Fecha de ensayo / Date of test: 10/08/2015



Zhu Yuan
 HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15100879 / ADHESION ON WET SURFACES CV15100879

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : PANJI
- 1.1.4 Denominación comercial / Commercial description : PJ668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 9.00R20 144/142L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 144 / 2.800
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1507/515	HVI-1507/516

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1507/517	HVI-1507/518

- 1.1.12 Llanta de ensayo / Test rim : 7.50 x 20
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1306/39	HVI-1306/40

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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1306/42	HVI-1306/41

1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1304/137	HVI-1304/138

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1304/139	HVI-1304/140

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7.50 x 19.5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/279	HVI-1206/278

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/276	HVI-1206/277

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT 1			Candidate			SRTT 2		
FL	2.210	98,7% Q _r	FL	2.245	80,2% Q _r	FL	2.208	98,6% Q _r
FR	2.204	98,4% Q _r	FR	2.243	80,1% Q _r	FR	2.203	98,3% Q _r
RL	2.192	97,9% Q _r	RL	2.239	80,0% Q _r	RL	2.190	97,8% Q _r
RR	2.190	97,8% Q _r	RR	2.236	79,9% Q _r	RR	2.191	97,8% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT FULFILS

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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Model	: PREMIUM
1.2.3	Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: HVI-1301/641
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	747	745	740	739
SRTT 2	746	744	739	739

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
FL	2.245	2.800	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	2	683
FR	2.243	2.800		2	682
RL	2.239	2.800	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	2	681
RR	2.236	2.800		2	679

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140071
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 06268-1
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 150129, 150129-1
- 1.4.5 Dispositivo para medir la velocidad / *Speed measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / Location : Pista ABS / ABS Surface, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / : 7 de enero de 2015 / January 7th 2015
Date of check on compliance of the test surface:
- 2.3. Características de la pista de ensayo /
Test track characteristics
 - 2.3.1 Profundidad grano de arena / Sand depth [mm] : 0,97
 - 2.3.2 BPN : 56
 - 2.3.3 Profundidad del agua / Water depth [mm] : Entre 0,75 a 1,00 / Between 0.75 and 1.00
- 2.4. Método de ensayo / Test method : Vehículo / Vehicle
- 2.5. Temperatura del aire T_a [°C] /
Air temperature T_a [°C] : 31,1
- 2.6. Temperatura de la pista de ensayo T_w [°C] :
Wet surface temperature T_w [°C]

5,0 ≤ T_w ≤ 35,0

SRTT 1	Candidato / Candidate	SRTT 2
28,0	29,2	32,5

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	29,87	4,13	24,84	4,97	29,19	4,23
2	29,32	4,21	24,12	5,12	29,83	4,14
3	29,09	4,24	24,92	4,95	29,73	4,15
4	-	-	24,25	5,09	-	-
5	-	-	24,17	5,11	-	-
6	-	-	24,83	4,97	-	-

Coefficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
1,36	1,54	1,17
< 3%	< 3%	< 3%

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

Validate this report with the security code «UVOPNHMK» at: <https://extranet.idiada.com/hom-cve>

CN23020659



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Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet grip index	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19.5	---	4,20 m/s ²	---	> 600
3	60 - 20	W - E	---	9.00R20	5,04 m/s ²	1,20	> 600
4	60 - 20	W - E	245/70R19.5	---	4,17 m/s ²	---	> 600

Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

$$G(T) = 1,20$$

Índice de adherencia en mojado (para el peor caso)

$$Wet\ grip\ index\ (Worst\ case) \geq 0,80$$

Índice de adherencia en mojado (cualquier medida)

$$Wet\ grip\ index\ (Any\ size) \geq 0,88$$

CUMPLE / ~~NO CUMPLE~~
FULFILLS / ~~NOT FULFILLS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 08/08/2015



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15090243 / ROLLING RESISTANCE CV15090243

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : YUWANG
- 1.1.4 Denominación comercial / Commercial description : YW668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 7.00R16LT 118/114L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 118 / 1.320
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 770
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1509/404
- 1.1.12 Llanta de ensayo / Test rim : 6,00 x 16
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1305/133
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

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IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / Identification : AMB-1000RRH

1.2.2 Diámetro de tambor / Drum diameter [mm] : 1.700

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / Surface : Acero liso / Smooth steel

1.2.4 Rugosidad / Roughness [μm] : $\leq 6,3$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / Measurement method : Par / Torque

1.3.2 Velocidad de ensayo / Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga (LI) / Carga [kg] : 118 / 1.320
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / Test load [kg / N] : 1.122 / 11.006,8

C2/C3 (% de carga simple): 85 (*)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.5 Presión de ensayo [kPa] / : 770
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

CUMPLE / NO-CUMPLE

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FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,01

$$20,0 \leq T_{am} \leq 30,0$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4

$C3 \leq 500$ N

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (T_t) [Nm] / *Input load torque* (T_t) [Nm] : 98,83

1.3.10 Par en skim test (T_{pl}) [Nm] / *Input skim test torque* (T_{pl}) [Nm] : 39,58

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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**2. RESULTADOS DE ENSAYO / TEST RESULTS**

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 6,34
- 2.1.2 Valor corregido por temperatura / : 6,34
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 6,19
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 6,19

- 2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 22/09/2015

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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TECHNICAL DOCUMENTATION

Type of tyre:

LH668



Date : Feb 10. 2023

Ext. : 06

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR
 - 1.5. Trade description(s)/Commercial name(s) : LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300
 - 1.6. Type of tyre : LH668
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias-belted~~/radial⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3
- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR

Trade description(s)/Commercial name(s):

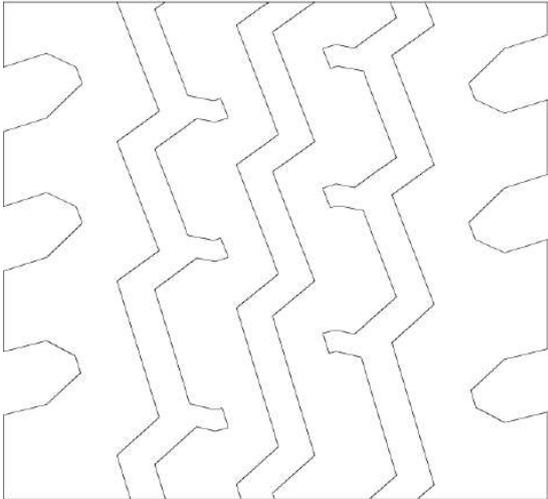
LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1072	7.00R16LT 118/114L	N.A.	73	0.80	6.5	N.A.
2	E9-00.1071	7.50R16LT 122/118L	N.A.	73	0.80	6.5	N.A.
3	E9-00.1070	8.25R16LT 128/124L	N.A.	73	0.80	6.5	N.A.
4	E9-00.1069	8.25R20 139/137L	N.A.	73	0.80	6.5	N.A.
5	E9-00.1000	9.00R20 144/142L	N.A.	73	0.80	6.5	N.A.
6	E9-00.1001	10.00R20 149/146K	N.A.	73	0.80	6.5	N.A.
7	E9-00.1002	11.00R20 152/149K	N.A.	73	0.80	6.5	N.A.
8	E9-00.1003	12.00R20 154/151K	N.A.	73	0.80	6.5	N.A.
9	E9-00.1068	12.00R20 156/153K	N.A.	73	0.80	6.5	N.A.
10	<u>E9-00.6533</u>	<u>12.00R20 156/153K</u>	<u>N.A.</u>	<u>73</u>	<u>0.80</u>	<u>6.5</u>	<u>N.A.</u>
11	E9-00.1004	12.00R24 160/157K	N.A.	73	0.80	6.5	N.A.
12	E9-00.1005	11R22.5 146/143L	N.A.	73	0.80	6.5	N.A.
13	E9-00.1102	11R22.5 146/143M	N.A.	73	0.80	6.5	N.A.
14	E9-00.6171	11R22.5 149/146L	N.A.	73	0.80	6.5	N.A.
15	E9-00.1006	12R22.5 152/149L	N.A.	73	0.80	6.5	N.A.
16	E9-00.1251	13R22.5 154/151L	N.A.	73	0.80	6.5	N.A.
17	E9-00.1204	13R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
18	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
19							
20							

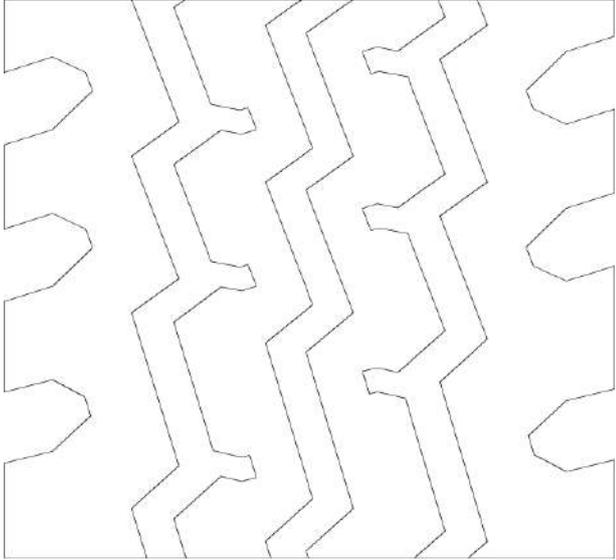
Worst Case Selection

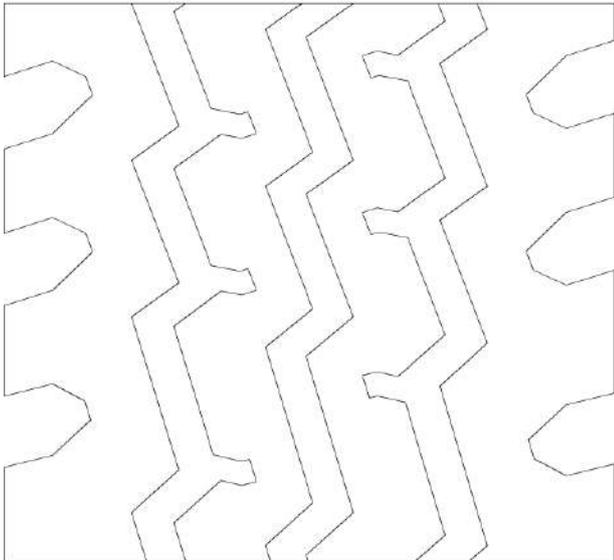
Test size for rolling sound	:	13R22.5 156/153L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	9.00R20 144/142L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.20$ (Wet grip test result)
Test size for rolling resistance	:	7.00R16LT 118/114L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 13R22.5 156/153L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.2441
Groove area ratio [%]	: 31.5 %
Width: main grooves [mm]	: 14
Depth: center groove [mm]	: 14.3
Depth: shoulder groove [mm]	: 15.3
Tyre tread pattern	

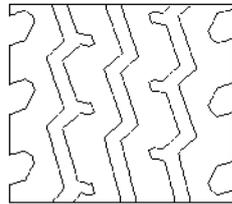
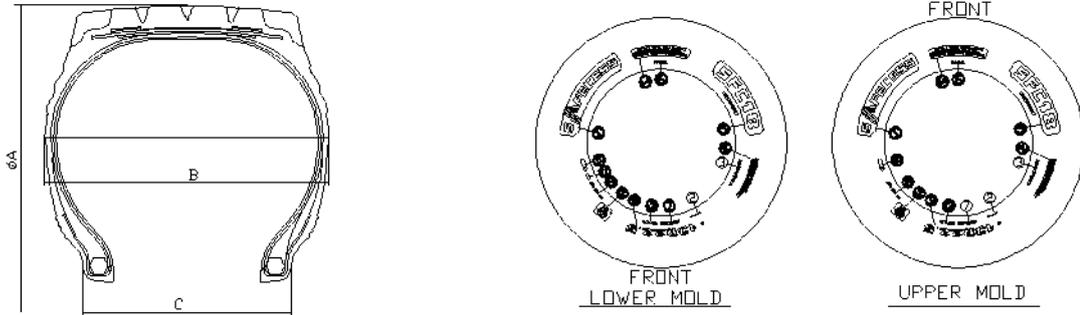
Drawing of the tread pattern
(for measured tyre using for tyre wet grip performance)

Manufacturer name	:	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	:	LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	:	9.00R20 144/142L
Market	:	EU
Pitch number	:	53
Pitch ratio (Max/Min)	:	1.2489
Groove area ratio [%]	:	31.5 %
Width: main grooves [mm]	:	11.3
Depth: center groove [mm]	:	14.5
Depth: shoulder groove [mm]	:	15.5
Tyre tread pattern		

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 7.00R16LT 118/114L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.2146
Groove area ratio [%]	: 32 %
Width: main grooves [mm]	: 9.0
Depth: center groove [mm]	: 11.0
Depth: shoulder groove [mm]	: 12.0
Tyre mass [kg]	21.5
Tread depth [mm]	11.0
Tread width [mm]	145
Curvature radius of tread crown [mm]	436
Tyre outer diameter[mm]	769
Tread plies	4 PLYES STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise performance)

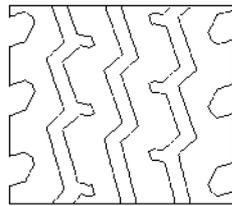
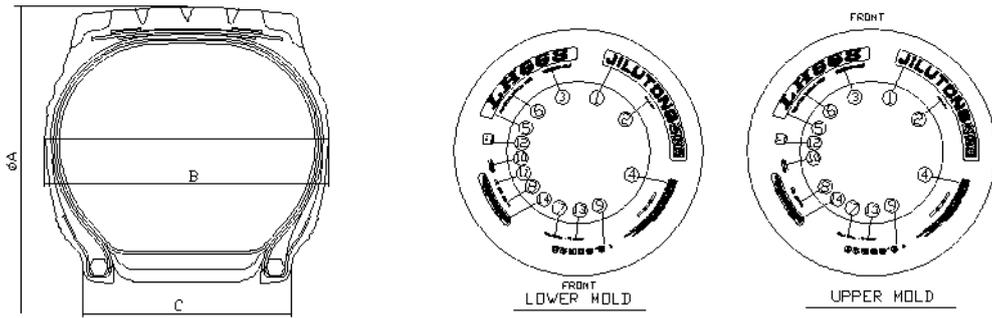


LH668, RW300, DD901, TG118
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECD18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8800 LBS) AT 350 kpa (123 PSI) COLD MAX LOAD DUAL 3600kg (7900 LBS) AT 350 kpa (123 PSI) COLD
13	STANDARD RIM 9.75
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	13R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

13R22.5 20PR	JILUTONG, RICHWAY, DDIYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KFAOTOS CROWN, CROWDWN, HUNTERROAD ECDSTAR	LH668, RW300, DD901 TG118, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECD18, SMX300	156/153	L	T/L	1124	320	260	15.3
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall (for measured tyre using for tyre wet grip performance)

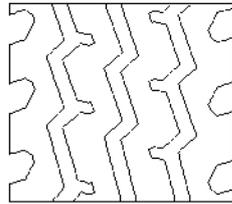
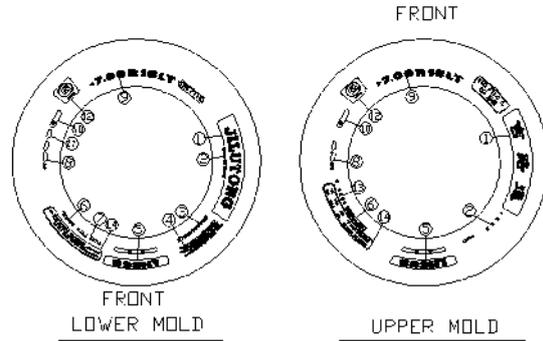
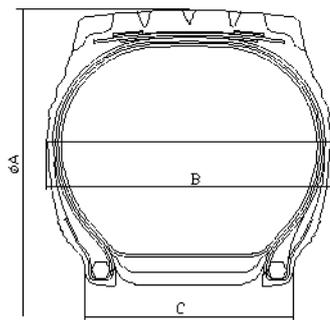


LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 2300kg (5175 LBS) AT 300 kpa (130 PSI) COLD MAX LOAD DUAL 2690kg (5940 LBS) AT 300 kpa (130 PSI) COLD
13	STANDARD RIM 7.0
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	9.00R20 144/142L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

9.00R20 16PR	JILUTONG, RICHWAY, OBYKING TRANSHING, SAFECESS, SUNFULCESS FJRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	144/142	L	T/T	1018	258	190	15.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			

Drawings of the sidewall
(for measured tyre using for tyre rolling resistance performance)



LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 1320kg (2910 LBS) AT 770 kpa (110 PSI) COLD MAX LOAD DUAL 1180kg (2600 LBS) AT 770 kpa (110 PSI) COLD
13	STANDARD RIM 5.50F
12	3CF000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	7.00R16LT 118/114L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

7.00R16LT 14PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	118/114	L	T/T	778	202	150	12.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1092*06**

Nº de extensión / *Extension No.*: **06**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23020659

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH668 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING; TRANSKING; SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR
- 6.2. Denominación(es) comercial(es) / Trade description(s)/commercial name(s) of the type of tyre : LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 73 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 73 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,20 (G) mediante el método de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.20 (G) using the vehicle or trailer ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 6,19 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 6.19 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CV15100481; CV16100663; CN17050370; CV18070697; CV18080073; CN19070753; CN21090766; CN23020659
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 02/11/2015; 20/10/2016; 26/05/2017; 24/07/2018; 02/08/2018; 29/07/2019; 28/09/2021; 15/02/2023
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23020659 / *See Test Report Number CN23020659*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are*:
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020659**

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN VI
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION VI

Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Clase del neumático / Tyre Class : C3
Categoría de uso / Category of use : Normal / Normal

Neumático de tracción / Traction tyre : No / No

Designación de tipo de neumático /
Tyre type designation : LH668

Marca / Brand name : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; HUNTERROAD;
ECOSTAR

Nombre comercial / Commercial name : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101; CL101;
H701; ECO18; SMX300

Lugar y fecha de emisión del informe /
Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.Bº / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020659

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 13R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15070679, IDIADA, 10/08/2015
See Annex 1, Test report CV15070679, IDIADA, 10/08/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 9.00R20 144/142L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15100879, IDIADA, 08/08/2015
See Annex 2, Test report CV15100879, IDIADA, 08/08/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 7.00R16LT 118/114L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CV15090243, IDIADA, 22/09/2015
See Annex 3, Test report CV15090243, IDIADA, 22/09/2015
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2022



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15070679 / ROLLING SOUND EMISSIONS CV15070679

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG118
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 13R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	565,22 ≤ 590,00 ≤ 621,74
Rueda derecha del eje delantero / Front axle right wheel	567,42 ≤ 590,00 ≤ 624,16
Rueda izquierda del eje trasero / Rear axle left wheel	623,57 ≤ 650,00 ≤ 685,93
Rueda derecha del eje trasero / Rear axle right wheel	632,57 ≤ 660,00 ≤ 695,83

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CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1507/511	HVI-1507/512

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1507/513	HVI-1507/514

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1205/675	HVI-1205/676

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/677	HVI-1205/678

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2.886	50 < 72,15 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2.895	50 < 72,38 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.122	50 < 78,05 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.158	50 < 78,95 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 75,38 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

- 1.2.6 Referencia interna del vehículo /
Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 140070
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto /
Track temperature measurement device : 141537
- 1.3.6 Anemómetro /
Wind speed measurement device : 150095
- 1.3.7 Velocímetro /
Speed measurement device : 109547
- 1.3.8 Termómetro de la temperatura ambiente /
Ambient temperature measurement device : 10004

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 30,9
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2 Temperatura de la superficie de ensayo [°C]: 48,6
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 1,9
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 42,1
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Presión barométrica [kPa] / : 100,19
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 58,15
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 176,0
Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:2011 /
 Date and method of check on compliance of the test surface with ISO 10844:2011:**

- 25 de mayo de 2015 / *May 25th 2015*
 - Emitido por / *Issued by* : IDIADA

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,5	W → E	72,5	72,9	30,4	48,5	72,5	72,9
2	64,7	W → E	73,8	73,8	30,7	48,5	73,8	73,8
3	66,6	W → E	73,6	74,0	31,5	48,5	73,6	74,0
4	68,8	W → E	74,6	74,5	31,0	48,6	74,6	74,5
5	72,6	W → E	75,1	75,3	30,8	48,6	75,1	75,3
6	74,5	W → E	75,4	75,5	30,9	48,6	75,4	75,5
7	76,8	W → E	76,5	76,4	30,8	48,7	76,5	76,4
8	78,4	W → E	77,2	76,7	30,8	48,6	77,2	76,7

- 3.1.** Pendiente de la recta de regresión / : 39,15
Regression line slope
- 3.2.** Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 74,8
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3.** Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 73
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4.** Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) / : 73 dB (A)
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO CUMPLE
 FULFILS / NOT FULFILS

Lugar de ensayo / Place of test: L'Albornar (Santa Oliva)

Fecha de ensayo / Date of test: 10/08/2015



Zhu Yuan
 HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15100879 / ADHESION ON WET SURFACES CV15100879

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : PANJI
- 1.1.4 Denominación comercial / Commercial description : PJ668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 9.00R20 144/142L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 144 / 2.800
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1507/515	HVI-1507/516

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1507/517	HVI-1507/518

- 1.1.12 Llanta de ensayo / Test rim : 7.50 x 20
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1306/39	HVI-1306/40

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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1306/42	HVI-1306/41

1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1304/137	HVI-1304/138

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1304/139	HVI-1304/140

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7.50 x 19.5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/279	HVI-1206/278

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/276	HVI-1206/277

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT 1			Candidate			SRTT 2		
FL	2.210	98,7% Q _r	FL	2.245	80,2% Q _r	FL	2.208	98,6% Q _r
FR	2.204	98,4% Q _r	FR	2.243	80,1% Q _r	FR	2.203	98,3% Q _r
RL	2.192	97,9% Q _r	RL	2.239	80,0% Q _r	RL	2.190	97,8% Q _r
RR	2.190	97,8% Q _r	RR	2.236	79,9% Q _r	RR	2.191	97,8% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT FULFILS

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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Model	: PREMIUM
1.2.3	Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: HVI-1301/641
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	747	745	740	739
SRTT 2	746	744	739	739

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
FL	2.245	2.800	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	2	683
FR	2.243	2.800		2	682
RL	2.239	2.800	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	2	681
RR	2.236	2.800		2	679

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140071
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 06268-1
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 150129, 150129-1
- 1.4.5 Dispositivo para medir la velocidad / *Speed measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / *Location* : Pista ABS / *ABS Surface*, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / : 7 de enero de 2015 / January 7th 2015
Date of check on compliance of the test surface:
- 2.3. Características de la pista de ensayo /
Test track characteristics
 - 2.3.1 Profundidad grano de arena / *Sand depth* [mm] : 0,97
 - 2.3.2 BPN : 56
 - 2.3.3 Profundidad del agua / *Water depth* [mm] : Entre 0,75 a 1,00 / *Between 0.75 and 1.00*
- 2.4. Método de ensayo / *Test method* : Vehículo / *Vehicle*
- 2.5. Temperatura del aire T_a [°C] / : 31,1
Air temperature T_a [°C]
- 2.6. Temperatura de la pista de ensayo T_w [°C] :
Wet surface temperature T_w [°C]
 $5,0 \leq T_w \leq 35,0$

SRTT 1	Candidato / <i>Candidate</i>	SRTT 2
28,0	29,2	32,5

CUMPLE / ~~NO-CUMPLE~~
FULFILS / NOT-FULFILS

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
FULFILS / NOT-FULFILS

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / <i>Candidate Tyre</i>		SRTT 2	
	Distancia de frenado / <i>Braking distance</i> [m]	Deceleración media / <i>Average deceleration</i> [m/s ²]	Distancia de frenado / <i>Braking distance</i> [m]	Deceleración media / <i>Average deceleration</i> [m/s ²]	Distancia de frenado / <i>Braking distance</i> [m]	Deceleración media / <i>Average deceleration</i> [m/s ²]
1	29,87	4,13	24,84	4,97	29,19	4,23
2	29,32	4,21	24,12	5,12	29,83	4,14
3	29,09	4,24	24,92	4,95	29,73	4,15
4	-	-	24,25	5,09	-	-
5	-	-	24,17	5,11	-	-
6	-	-	24,83	4,97	-	-

Coeficiente de variación / Coefficient of variation:

SRTT 1	Candidato / <i>Candidate</i>	SRTT 2
1,36	1,54	1,17
< 3%	< 3%	< 3%

 CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

 Validate this report with the security code «UVOPNHMK» at: <https://extranet.idiada.com/hom-cve>

CN23020659



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Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet grip index	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19.5	---	4,20 m/s ²	---	> 600
3	60 - 20	W - E	---	9.00R20	5,04 m/s ²	1,20	> 600
4	60 - 20	W - E	245/70R19.5	---	4,17 m/s ²	---	> 600

Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

$$G(T) = 1,20$$

Índice de adherencia en mojado (para el peor caso)

$$Wet\ grip\ index\ (Worst\ case) \geq 0,80$$

Índice de adherencia en mojado (cualquier medida)

$$Wet\ grip\ index\ (Any\ size) \geq 0,88$$

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 08/08/2015



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15090243 / ROLLING RESISTANCE CV15090243

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : YUWANG
- 1.1.4 Denominación comercial / Commercial description : YW668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 7.00R16LT 118/114L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 118 / 1.320
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 770
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1509/404
- 1.1.12 Llanta de ensayo / Test rim : 6,00 x 16
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1305/133
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

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1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / Identification : AMB-1000RRH

1.2.2 Diámetro de tambor / Drum diameter [mm] : 1.700

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / Surface : Acero liso / Smooth steel

1.2.4 Rugosidad / Roughness [μm] : $\leq 6,3$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / Measurement method : Par / Torque

1.3.2 Velocidad de ensayo / Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga (LI) / Carga [kg] : 118 / 1.320
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / Test load [kg / N] : 1.122 / 11.006,8

C2/C3 (% de carga simple): 85 (*)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.5 Presión de ensayo [kPa] / : 770
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

CUMPLE / NO-CUMPLE

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FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,01

$$20,0 \leq T_{am} \leq 30,0$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4

$$C3 \leq 500 \text{ N}$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (Tt) [Nm] / *Input load torque* (Tt) [Nm] : 98,83

1.3.10 Par en skim test (Tpl) [Nm] / *Input skim test torque* (Tpl) [Nm] : 39,58

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THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

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2. RESULTADOS DE ENSAYO / TEST RESULTS

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 6,34
- 2.1.2 Valor corregido por temperatura / : 6,34
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 6,19
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 6,19

- 2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 22/09/2015



Zhu Yuan
HOMOLOGATION ENGINEER

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TECHNICAL DOCUMENTATION

Type of tyre:
LH668



Date : Feb 10. 2023
Ext. : 06

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR
 - 1.5. Trade description(s)/Commercial name(s) : LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300
 - 1.6. Type of tyre : LH668
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3
- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR

Trade description(s)/Commercial name(s):

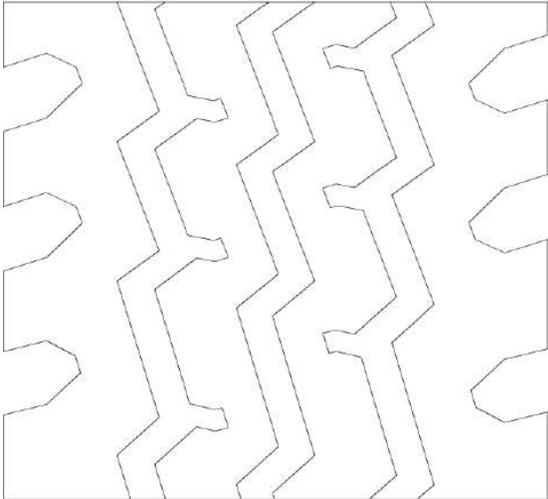
LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1072	7.00R16LT 118/114L	N.A.	73	0.80	6.5	N.A.
2	E9-00.1071	7.50R16LT 122/118L	N.A.	73	0.80	6.5	N.A.
3	E9-00.1070	8.25R16LT 128/124L	N.A.	73	0.80	6.5	N.A.
4	E9-00.1069	8.25R20 139/137L	N.A.	73	0.80	6.5	N.A.
5	E9-00.1000	9.00R20 144/142L	N.A.	73	0.80	6.5	N.A.
6	E9-00.1001	10.00R20 149/146K	N.A.	73	0.80	6.5	N.A.
7	E9-00.1002	11.00R20 152/149K	N.A.	73	0.80	6.5	N.A.
8	E9-00.1003	12.00R20 154/151K	N.A.	73	0.80	6.5	N.A.
9	E9-00.1068	12.00R20 156/153K	N.A.	73	0.80	6.5	N.A.
10	<u>E9-00.6533</u>	<u>12.00R20 156/153K</u>	<u>N.A.</u>	<u>73</u>	<u>0.80</u>	<u>6.5</u>	<u>N.A.</u>
11	E9-00.1004	12.00R24 160/157K	N.A.	73	0.80	6.5	N.A.
12	E9-00.1005	11R22.5 146/143L	N.A.	73	0.80	6.5	N.A.
13	E9-00.1102	11R22.5 146/143M	N.A.	73	0.80	6.5	N.A.
14	E9-00.6171	11R22.5 149/146L	N.A.	73	0.80	6.5	N.A.
15	E9-00.1006	12R22.5 152/149L	N.A.	73	0.80	6.5	N.A.
16	E9-00.1251	13R22.5 154/151L	N.A.	73	0.80	6.5	N.A.
17	E9-00.1204	13R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
18	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
19							
20							

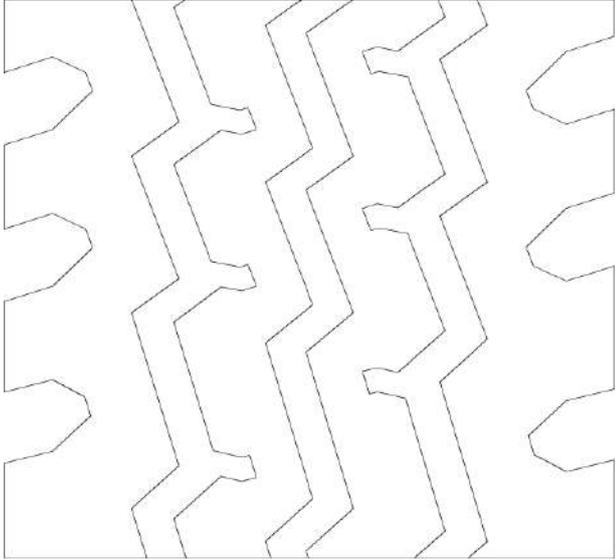
Worst Case Selection

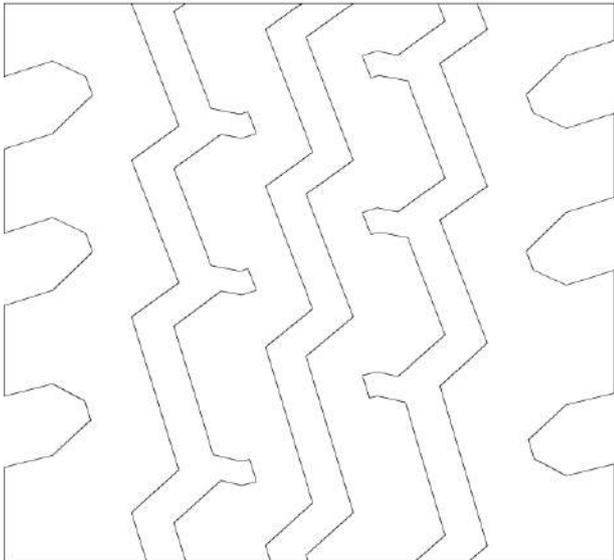
Test size for rolling sound	:	13R22.5 156/153L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	9.00R20 144/142L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.20$ (Wet grip test result)
Test size for rolling resistance	:	7.00R16LT 118/114L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 13R22.5 156/153L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.2441
Groove area ratio [%]	: 31.5 %
Width: main grooves [mm]	: 14
Depth: center groove [mm]	: 14.3
Depth: shoulder groove [mm]	: 15.3
Tyre tread pattern	

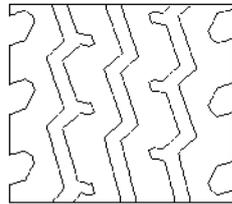
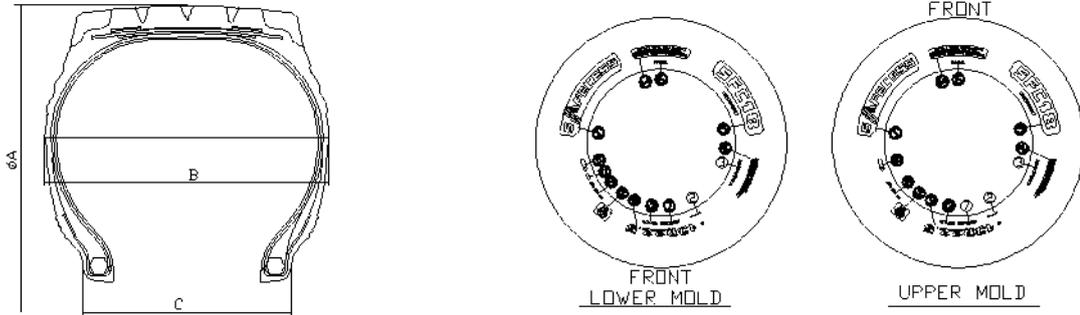
Drawing of the tread pattern
(for measured tyre using for tyre wet grip performance)

Manufacturer name	:	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	:	LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	:	9.00R20 144/142L
Market	:	EU
Pitch number	:	53
Pitch ratio (Max/Min)	:	1.2489
Groove area ratio [%]	:	31.5 %
Width: main grooves [mm]	:	11.3
Depth: center groove [mm]	:	14.5
Depth: shoulder groove [mm]	:	15.5
Tyre tread pattern		

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 7.00R16LT 118/114L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.2146
Groove area ratio [%]	: 32 %
Width: main grooves [mm]	: 9.0
Depth: center groove [mm]	: 11.0
Depth: shoulder groove [mm]	: 12.0
Tyre mass [kg]	21.5
Tread depth [mm]	11.0
Tread width [mm]	145
Curvature radius of tread crown [mm]	436
Tyre outer diameter[mm]	769
Tread plies	4 PLYES STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise performance)

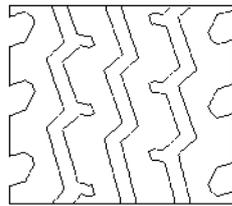
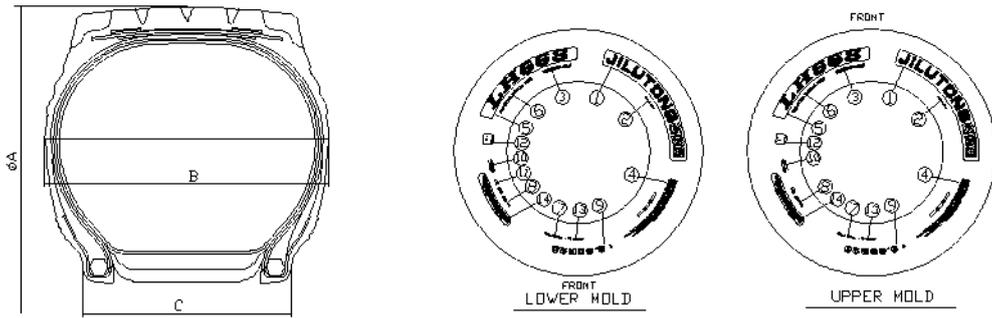


LH668, RW300, DD901, TG118
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECD18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8800 LBS) AT 350 kpa (123 PSI) COLD MAX LOAD DUAL 3600kg (7900 LBS) AT 350 kpa (123 PSI) COLD
13	STANDARD RIM 9.75
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	13R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

13R22.5 20PR	JILUTONG, RICHWAY, DDIYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KFAOTOS CROWN, CROWN, HUNTERROAD ECDSTAR	LH668, RW300, DD901 TG118, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECD18, SMX300	156/153	L	T/L	1124	320	260	15.3
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall (for measured tyre using for tyre wet grip performance)

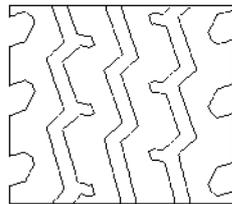
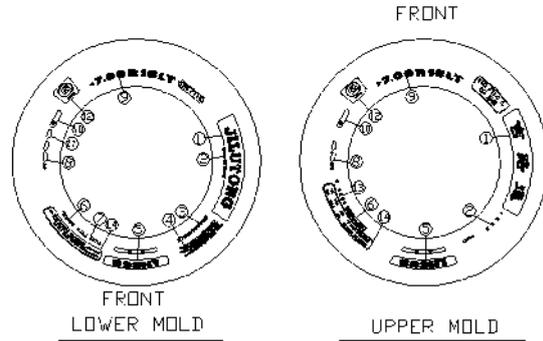
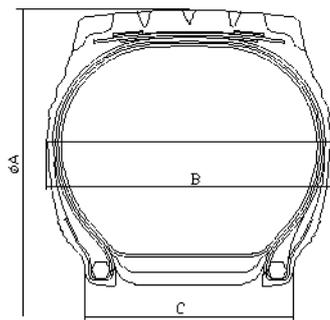


LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 2300kg (5175 LBS) AT 300 kpa (130 PSI) COLD MAX LOAD DUAL 2690kg (5940 LBS) AT 300 kpa (130 PSI) COLD
13	STANDARD RIM 7.0
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	9.00R20 144/142L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

9.00R20 16PR	JILUTONG, RICHWAY, OBYKING TRANSHING, SAFECESS, SUNFULCESS FJRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	144/142	L	T/T	1018	258	190	15.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			

Drawings of the sidewall
(for measured tyre using for tyre rolling resistance performance)



LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 1320kg (2910 LBS) AT 770 kpa (110 PSI) COLD MAX LOAD DUAL 1180kg (2600 LBS) AT 770 kpa (110 PSI) COLD
13	STANDARD RIM 5.50F
12	3CF000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	7.00R16LT 118/114L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

7.00R16LT 14PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	118/114	L	T/T	778	202	150	12.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



(1)

E9*117R02/12*1145*03

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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / Approval No ⁽³⁾: **E9*117R02/12*1145*03**

Nº de extensión / Extension No.: **03**

Sufijos / Suffixes ⁽⁴⁾: **02S2WR2**

- | | | | |
|------|--|---|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : | WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang City, Shandong
Province (CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : | N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : | C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : | normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : | No / No |
| 4.2. | Neumático de tracción /
<i>Traction tyre</i> | : | Si / Yes |
| 5. | Estructura del neumático /
<i>Tyre structure</i> | : | radial / <i>radial</i> |
| 6. | Designación de tipo de neumático /
<i>Tyre type designation</i> | : | LH688 |
| 6.1. | Marca(s) /
<i>Brand name(s)/Trademark(s)</i> | : | JILUTONG; SAFECES; FIREMAX; KPATOS;
TRANSKING; FIRELION; ODYKING;
RUNTEK; CROWN; PANJI; YUWANG;
GAOLICHENG; HUNTERROAD; ECOSTAR;
<u>SUNWIDE</u> |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.2. Denominación(es) comercial(es)/ Trade description(s)/Commercial name(s) of the type of tyre : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 74 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 74 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,01 (G) mediante el método de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.01 (G) using the vehicle or trailer ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6 5,64 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6 5.64 N/kN
- 8.4. Nivel de adherencia sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7 N/A (Índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow grip level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (Snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / Number of report issued by the Technical Service : CN17110405; CN18070375; CN19070754; CN21090767
10. Fecha del informe emitido por este Servicio / Date of report issued by that service : 28/11/2017; 19/07/2018; 29/07/2019; 28/09/2021

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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11. Motivo(s) de la extensión (en su caso) /
Reason(s) of extension (if applicable) : Ver informe de ensayo número CN21090767 / *See Test Report Number CN21090767*
12. Observaciones /
Any remarks : N/A
13. Lugar /
Place : Madrid
14. Fecha/
Date : Ver firma electrónica /
See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación /*Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾*
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/Commercial name the list of tyre size designations and Service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*



**INFORME/REPORT N° CN21090767**

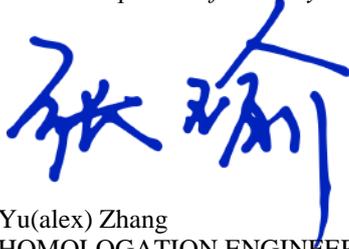
REGLAMENTO CEPE/ONU 117R02/12 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN III
UN/ECE REGULATION 117R02/12 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION III

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: Sí / Yes
Marca / Brand name	: JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; PANJI; YUWANG; GAOLICHENG; HUNTERROAD; ECOSTAR; <u>SUNWIDE</u>
Nombre comercial / Commercial name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; <u>SDR530</u>
Designación de tipo de neumático / Tyre type designation	: LH688
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 28/09/2021

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO CEPE/ONU 117R02/12 Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to UN/ECE REGULATION 117R02/12 The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Yu(alex) Zhang
HOMOLOGATION ENGINEER

V.B°. / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN21090767

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/80R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV17080406, IDIADA, 14/09/2017
See Annex 1, Test report CV17080406, IDIADA, 14/09/2017
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 295/80R22.5 152/149L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN16120066, IDIADA, 08/11/2016
See Annex 2, Test report CN16120066, IDIADA, 08/11/2016
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 295/80R22.5 152/149L (Nuevo valor limite calculado / *New calculated limit value*)
Ver Anexo 3, Informe CN16110065, IDIADA, 19/10/2016
See Annex 3, Test report CN16110065, IDIADA, 19/10/2016
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Inclusión de nuevas marcas / *Addition of new brand names*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
4. Nuevo valor límite calculado de acuerdo al Anuncio por el servicio técnico 2018-01 Revisión 03/ *New calculated limit value according to Announcement for the technical service 2018-01 Revision 03*
Para verificar si un índice de carga menor (LI_{menor}) cumple los requisitos del reglamento, el valor límite para el neumático ensayado ($LI_{candidato}$) se calcula por la fórmula:

To verify if a lower load index (LI_{lowest}) meets the requirements of the regulation, the limit value for the tested tyre ($LI_{candidate}$) is calculated by the formula:

$$\text{Nuevo límite calculado} = (\text{RRC-valor límite R117} - 0.3\# \text{ N/kN}) - 0.06 * x (LI_{candidato} - LI_{menor})$$

$$\text{Calculated limit value} = (\text{RRC-limit value R117} - 0.3\# \text{ N/kN}) - 0.06 * x (LI_{candidate} - LI_{lowest})$$

El valor límite del reglamento será incrementado por un factor de seguridad de 0,3 N/kN

the limit value of the regulation will be increased by a safety margin of 0.3 N/kN

* La pendiente del coeficiente de resistencia en frente del índice de carga se fija en 0,06.

* *the slope of rolling resistance coefficient versus load index is fixed on 0.06.*

$$\text{Calculated limit value} = (6.5 - 0.3\# \text{ N/kN}) - 0.06 * x (152 - 146) = 5.84 \text{ N/kN}$$

5. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 5.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level.*
 - 5.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces.*
 - 5.3. Anexo 3 / *Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance.*
 - 5.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation.*

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 28/09/2021



Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV17080406 / ROLLING SOUND EMISSIONS CV17080406

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : JILUTONG
- 1.1.4 Denominación comercial / Commercial description : LH688
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre class : C3
- 1.1.7 Medida del neumático / Tyre size : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	576,01 ≤ 580,00 ≤ 633,61
Rueda derecha del eje delantero / Front axle right wheel	558,86 ≤ 560,00 ≤ 614,74
Rueda izquierda del eje trasero / Rear axle left wheel	590,79 ≤ 595,00 ≤ 649,87
Rueda derecha del eje trasero / Rear axle right wheel	571,10 ≤ 575,00 ≤ 628,21

CUMPLE / NO-CUMPLE

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
 THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1708/244-1	HVI-1708/244-2

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1708/244-3	HVI-1708/244-4

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1205/675	HVI-1205/676

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/677	HVI-1205/678

1.1.15 Carga neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2.930	50 < 73,25 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2.860	50 < 71,50 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	2.990	50 < 74,75 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	2.910	50 < 72,75 < 90

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 73,06 < 80

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
 THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
 IDIADA Automotive Technology, S.A. N.I.F. A43581610



1.2. Vehículo de ensayo / Test vehicle

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Modelo / Model	: PREMIUM
1.2.3	Año / Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla [mm] / Wheelbase [mm]	: 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5.000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.6	Referencia interna del vehículo Vehicle internal reference	: HVI-1205/350
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1.3. Equipo de ensayo / Test equipment

1.3.1	Sonometro 1 / Sound level meter 1	: 170815
1.3.2	Sonometro 2 / Sound level meter 2	: 170817
1.3.3	Manómetro / Manometer	: 141419
1.3.4	Báscula / Weight scale	: 01199
1.3.5	Termómetro de la temperatura del asfalto / Track temperature measurement device	: 141537, 141537-5
1.3.6	Anemómetro / Wind speed measurement device	: 163105
1.3.7	Velocímetro / Speed measurement device	: 12626
1.3.8	Termómetro de la temperatura ambiente / Ambient temperature measurement device	: 10004, 141537-4

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 26,0
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2. Temperatura de la superficie de ensayo [°C] / : 28,9
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : < 1,5
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 45,1
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A)
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Dirección de viento [°] / : 160,7
Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:1994 /
 Date and method of check on compliance of the test surface with ISO 10844:1994:**

- 25 de Mayo de 2015 / *May 25th 2016*
- 3.0 m de borde recto / *3.0 m straight edge*
- Coeficiente de absorción acústica / *Sound absorption coefficient*
- Parche de arena / *Sand patch*
- Emitido por / *Issued by* : IDIADA

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,5	E → W	73,0	74,0	25,3	28,0	73,0	74,0
2	64,5	E → W	74,2	74,4	25,1	28,2	74,2	74,4
3	66,6	E → W	73,5	74,5	26,3	28,3	73,5	74,5
4	68,7	E → W	74,7	75,3	26,1	28,8	74,7	75,3
5	72,4	E → W	75,3	75,3	26,1	28,6	75,3	75,3
6	74,6	E → W	75,4	75,9	26,1	28,9	75,4	75,9
7	76,8	E → W	76,6	76,4	26,4	29,6	76,6	76,4
8	78,2	E → W	77,2	77,2	26,9	30,6	77,2	77,2

- 3.1. Pendiente de la recta de regresión / : 33,62
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] /
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 75,1
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / *Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]* : 74
- 3.4. Valor límite para la clase C3 de neumático y Stage 2: 75 dB(A) /
Limit value for the Class C3 tyre Stage 2: 75 dB (A)

CUMPLE / NO CUMPLE
 FULFILS / NOT FULFILS

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4. FOTOS DEL NEUMÁTICO DE ENSAYO / *TEST TYRE PICTURES*



Foto 1 / *Picture 1. Flanco / Sidewall*



Foto 2 / *Picture 2. Banda de rodadura / Tread pattern*

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 14/09/2017

Yu (alex) Zhang
HOMOLOGATION ENGINEER



ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CN16120066 / ADHESION ON WET SURFACES CN16120066

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : SAFECESS
- 1.1.4 Denominación comercial / Commercial description : SFC08
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 295/80R22.5 152/149L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 152 / 3.550
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
CN16120066-1	CN16120066-2

Trasera izquierda / Rear left	Trasera derecha / Rear right
CN16120066-3	CN16120066-4

- 1.1.12 Llanta de ensayo / Test rim : 9,00 x 22,5

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1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
G-B227	G-B225
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
G-B226	G-B228

1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 Referencia interna del SRTT /
SRTT internal reference

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
BW-FG-031	BW-FG-032
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
BW-FG-030	BW-FG-033

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 9.00 x 22.5

1.1.17 Referencia interna de la llanta del SRTT :
Test SRTT rim internal reference

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
G-B229	G-B230
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
G-B231	G-B232

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT1			Candidato / <i>Candidate</i>			SRTT2		
DI / <i>FL</i>	2.994	79,8% Qr	DI / <i>FL</i>	2.988	84,2% Qr	DI / <i>FL</i>	3.002	80,1% Qr
DD / <i>FR</i>	2.824	75,3% Qr	DD / <i>FR</i>	2.858	80,5% Qr	DD / <i>FR</i>	2.840	75,7% Qr
TI / <i>RL</i>	2.818	75,1% Qr	TI / <i>RL</i>	2.828	79,7% Qr	TI / <i>RL</i>	2.818	75,1% Qr
TD / <i>RR</i>	2.876	76,7% Qr	TD / <i>RR</i>	2.878	81,1% Qr	TD / <i>RR</i>	2.878	76,7% Qr

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

1.2.1	Marca / Trade name	: SITRAK
1.2.2	Modelo / Model	: C7H400
1.2.3	Año / Year	: 2015
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.600
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: SB-G-110
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	679	631	630	646
SRTT 2	682	636	630	646

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
DI / FL	2.988	3.550	1- Si / If Q _t < 75% Q _r entonces / then: P_t = (0,7) x P_r	2	726
DD / FR	2.858	3.550		2	686
TI / RL	2.828	3.550	2- Si / If Q _t ≥ 75% Q _r entonces / then: P_t = P_r x (Q_t / Q_r)^{1,25}	2	677
TD / RR	2.878	3.550		2	692

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : PCL DAC1C08C
- 1.5.2 Báscula / *Weight scale* : SB-G-070
- 1.4.3 Termómetro / *Thermometer* : G-B029
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : G-B030
- 1.4.5 Dispositivo para medir la velocidad / *Speed measurement device* : SB-G-109
- 1.4.6 Pedal de fuerza / *Force pedal* : SB-G-11

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / Location : Pista ABS / ABS Surface, CATARC Yancheng
- 2.2. Fecha de verificación de la pista de ensayo / Date of check on compliance of the test surface: 3 de julio de 2015 / July 3rd 2015
- 2.3. Características de la pista de ensayo / Test track characteristics
 - 2.3.1 Profundidad grano de arena / Sand depth [mm] : 0,98
 - 2.3.2 BPN : 58,0
 - 2.3.3 Profundidad del agua / Water depth [mm] : Entre 0,50 a 1,50 / Between 0.50 and 1.50
- 2.4. Método de ensayo / Test method : Vehículo / Vehicle
- 2.5. Temperatura del aire T_a [°C] / Air temperature T_a [°C] : 19,7
- 2.6. Temperatura de la pista de ensayo T_w [°C] / Wet surface temperature T_w [°C] :
5,0 ≤ T_w ≤ 35,0

SRTT 1	Candidato / Candidate	SRTT 2
19,5	18,8	18,4

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	23,02	5,36	22,70	5,44	22,57	5,47
2	23,02	5,36	23,10	5,34	22,87	5,40
3	22,55	5,47	22,54	5,48	22,44	5,50
4	-	-	21,72	5,68	-	-
5	-	-	22,39	5,51	-	-
6	-	-	22,80	5,41	-	-

Coeficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
1,20	2,11	0,97
< 3%	< 3%	< 3%

CUMPLE / ~~NO CUMPLE~~
 FULFILS / ~~NOT FULFILS~~

Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet Grip Index G	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	315/70R22.5	---	5,40 m/s ²	---	> 600
3	60 - 20	W - E	---	295/80R22.5	5,48 m/s ²	1,01	> 600
4	60 - 20	W - E	315/70R22.5	---	5,46 m/s ²	---	> 600

Índice de adherencia en mojado del neumático candidato / Wet grip index of the candidate tyre

$$G = 1,01$$

Índice de adherencia en mojado (caso más desfavorable)

$$Wet grip index (Worst case) \geq 0,65$$

Índice de adherencia en mojado (cualquier medida)

$$Wet grip index (Any size) \geq 0,715$$

CUMPLE / ~~NO CUMPLE~~
 FULFILS / ~~NOT FULFILS~~

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4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: Yancheng, China

Fecha de ensayo / Date of test: 08/11/2016

Yu (alex) Zhang
HOMOLOGATION ENGINEER

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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CN16110065 / ROLLING RESISTANCE CN16110065

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

1.1.1	Solicitante / <i>Applicant</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
1.1.2	Fabricante / <i>Manufacturer</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO..LTD (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
1.1.3	Marca / <i>Trade Name</i>	: SAFECES
1.1.4	Denominación comercial / <i>Commercial description</i>	: SFC08
1.1.5	Categoría de uso / <i>Category of use</i>	: Normal / <i>Normal</i>
1.1.6	Clase del neumático / <i>Tyre Class</i>	: C3
1.1.7	Medida del neumático / <i>Tyre size</i>	: 295/80R22.5 152/149L
1.1.8	Estructura del neumático / <i>Tyre structure</i>	: Radial
1.1.9	Índice de carga/Masa correspondiente / <i>Load index / Corresponding mass Q_r [kg]</i>	: 152 / 3.550
1.1.10	Presión de inflado / <i>Inflation pressure [kPa]</i>	: 900
1.1.11	Referencia interna de neumático de ensayo / <i>Test tyre internal reference</i>	: 16-499
1.1.12	Llanta de ensayo / <i>Test rim</i>	: 9,00 x 22,5
1.1.13	Referencia interna de la llanta de ensayo / <i>Test rim internal reference</i>	: CTQI-01
1.1.14	Material de la llanta de ensayo / <i>Test rim material</i>	: Acero / <i>Steel</i>

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1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / *Identification* : B1037

1.2.2 Diámetro de tambor / *Drum diameter* [mm] : 1.707,6

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

1.2.3 Superficie / *Surface* : Acero pulido / *Smooth steel*

1.2.4 Rugosidad / *Roughness* [µm] : ≤ 6,3

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / *Measurement method* : Fuerza / *Force*

1.3.2 Velocidad de ensayo / *Test speed* [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

1.3.3 Índice de carga /
Masa correspondiente Q_r [kg] : 152 / 3.550
Load index /
Corresponding mass Q_r [kg]

1.3.4 Carga de ensayo / *Test load* [kg / N] : 3.017,5 / 29.591,6

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

C2/C3 (% de carga simple)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

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1.3.5 Presión de inflado en el ensayo / : 900
Test inflation pressure, initial [kPa]

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple

(): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

1.3.6 Distancia del eje del neumático
a la superficie exterior del tambor
bajo condiciones de estado estacionario
durante ensayo(r_L) / : 0,498
Distance from the tyre axis to the drum outer surface under steady state conditions during test(r_L)

1.3.7 Distancia del eje del neumático
a la superficie exterior del tambor
bajo condiciones de estado estacionario
durante parásitas (r_L) / : 0,528
Distance from the tyre axis to the drum outer surface under steady state conditions during skim test(r_L)

1.3.8 Temperatura ambiente / : 23,44
Ambient temperature T_{am} [°C]
 $20.0 \leq T_{am} \leq 30.0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

1.3.9 Carga en el ensayo de parásitas / : 397,51
Skim test load [N]
 $C3 \leq 500 \text{ N}$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



1.3.10	Fuerza en el eje / <i>Spindle force (Ft) [N]</i>	: 117,71
1.3.11	Fuerza en el eje durante parásitas / <i>Spindle force during skim test (Ft) [N]</i>	: 7,86
1.3.12	Pérdida de parásitas / <i>Parasitic loss (Fpl) [N]</i>	: 12,72
1.3.13	Fuerza de resistencia a rodadura / <i>Rolling resistance forcé (Fr) [N]</i>	: 173,69

2. RESULTADOS DE ENSAYO / TEST RESULTS

2.1.	Coefficiente de resistencia a la rodadura / <i>Rolling resistance coefficient</i>	
2.1.1	Valor inicial / <i>Initial value</i> [N/kN]	: 5,87
2.1.2	Valor corregido por temperatura / <i>Temperature corrected value</i> [N/kN]	: 5,81
2.1.3	Valor corregido por diámetro de tambor y temperatura / <i>Temperature and drum diameter corrected value</i> [N/kN]	: 5,64

Coefficiente de resistencia a la rodadura / *Rolling resistance coefficient* Cr [N/kN] = 5,64

2.2. Valor límite calculado / *Calculated limit value*

LI-más bajo (peor caso) / LI-lowest (worst case) : 146

RRC = (RRC-limit value R117 - 0,3 N/kN) - 0,06 x (LI-candidate – LI-lowest) = 5.84 N/kN

2.3. Valor límite para neumático de clase C3 (Etapa 2) / Limit value for the Class C3 tyre (Stage 2): 5,84 N/kN

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: Beijing, China

Fecha de ensayo / Date of test: 19/10/2016

Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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TECHNICAL DOCUMENTATION

INFORMATION DOCUMENT NO. E9*117R02/12*1145*03

According to ECE-Regulation

**UNIFORM PROVISIONS CONCERNING THE APPROVAL OF TYRES WITH REGARD TO
ROLLING SOUND EMISSIONS AND/OR TO ADHENSION ON WET SURFACES AND/OR TO
ROLLING RESISTANCE ACCORDING TO ECE-R117.02 SERIES OF ADMENDMENTS**

ECE Regulation 117

Tread pattern:

LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08;
SDR530

This model information document consists of page 1~7

Date: 09/17/2021
Extension: 03

IDIADA CN21090767

Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

GENERAL INFORMATION

1 GENERAL

- 1.1 Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.2 Name and address of manufacturing plant(s) : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.3 Brand name(s), Trade description(s) or Trade mark(s) to be used for particular tyre type-approval requested : Brand name: JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; PANJI; YUWANG; GAOLICHENG; HUNTERROAD; ECOSTAR; SUNWIDE
Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530
- 1.4 Type of tyre : LH688
- ### 2 TYRE
- 2.1 Tyre classification (class C1, C2, C3) : ~~Class C1 / Class C2~~ / Class C3
- 2.2 Tyre structure : ~~diagonal / bias belted~~ / radial
- 2.3 For class C1 tyre , state whether
- 2.3.1.1 Reinforced (or extra load) in case of approval with regarding to rolling sound mission level : see the attached list of Tyre sizes
- 2.3.1.2 Speed category symbol "Q" or below (not including "H") or "R" and above (including "H") in case of snow tyres for approval with regarding to adhesion on wet surfaces : see the attached list of Tyre sizes
- 2.4 For class C2, C3 tyre , state whether
- 2.4.1 Traction tyre : Yes / ~~No~~
- 2.5. Category of use(normal, snow, special) : normal / ~~snow / special~~
- 2.5.1 Snow tyre for use in severe snow conditions : ~~Yes~~ / No
- 2.6. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. This may be by means of descriptions supplemented by technical data, drawings, photographs and Computer Tomography (CT), and must be sufficient to allow the Type Approval Authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance : Refer to f drawing of the tread pattern

Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

- 2.7. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : See attachment drawings of the tyre sidewall

List of attachment:

List of Tyre designation sizes	page 3
Drawing of the tread pattern (for test representative tyres)	page 4-5
The drawings of the tyre sidewall	page 6-7

List of Tyre designation sizes

Brand name or Trade mark: JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; PANJI; YUWANG; GAOLICHENG; HUNTERROAD; ECOSTAR; SUNWIDE
Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

No.	Tyre size	Standard/ Extra load	load	Speed	Approval Number
1	11R22.5	Standard	146/143	L	E9-00.1005
2	<u>11R22.5</u>	<u>Standard</u>	<u>149/146</u>	<u>L</u>	<u>E9-00.6171</u>
3	12R22.5	Standard	152/149	L	E9-00.1006
4	295/80R22.5	Standard	152/149	L	E9-00.1008
5	315/80R22.5	Standard	154/151	L	E9-00.1009
6	315/80R22.5	Standard	156/153	L	E9-00.1067

The worst case for Rolling sound emission test:

TEST SIZE : 315/80R22.5 156/153L

Because of : Largest section width (if the same section width: lowest aspect ratio; largest rim size)

The worst case for Wet adhesion level test:

TEST SIZE : 295/80R22.5 152/149L

Because of : Any tyre size that meets ten percent (10%) or more above the minimum required wet grip value can represent the whole tyre size range of the tread pattern type.

For any tyre size the limited value for the test tire meet or above: 0.715

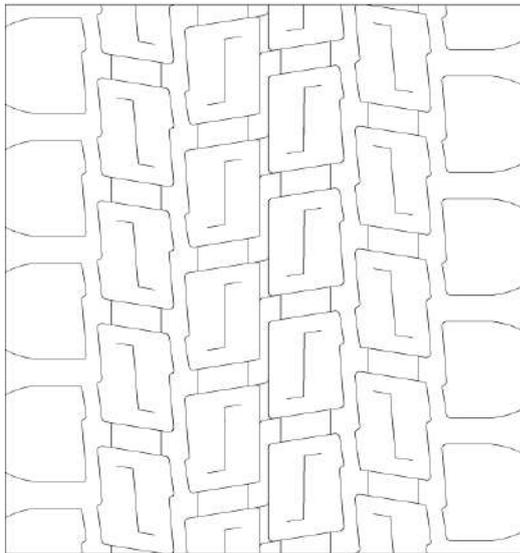
The worst case for Rolling resistance test:

TEST SIZE : 295/80R22.5 152/149L

Because of : The RRC value of tested candidate tyre other than the worst case tyre shall be equal or less than new calculated limit value. New limit value for the tested tyre is: 5.84N/kN

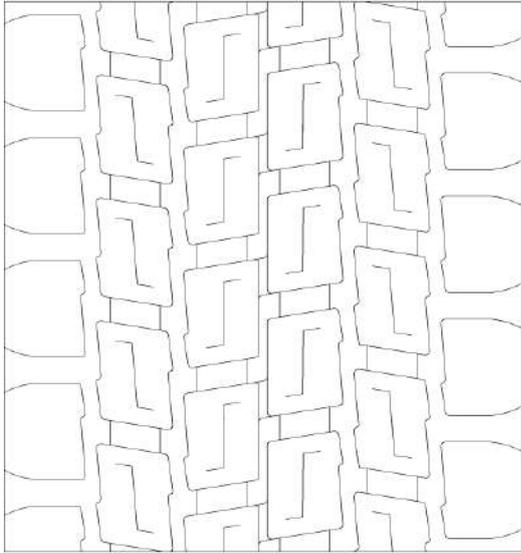
Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; <u>SDR530</u>
Tyre Size	315/80R22.5 156/153L
Market	EU
Pitch number	52
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	68%
Width: main grooves [mm]	7.5
Depth: center groove [mm]	22.0
Depth: shoulder groove [mm]	22.0
Detail drawing of tread pattern	

Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; <u>SDR530</u>
Tyre Size	295/80R22.5 152/149L
Market	EU
Pitch number	51
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	68.5%
Width: main grooves [mm]	4.0
Depth: center groove [mm]	21.0
Depth: shoulder groove [mm]	21.0
Detail drawing of tread pattern	

Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

The sample of drawings or photographs of the tyre sidewall:

15	TRACTION
14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8820 LBS) AT 850 kpa (123 PSI) COLD MAX LOAD DUAL 3650kg (8050 LBS) AT 850 kpa (123 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	(E) XXXXX
9	315/80R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

LH688 , SFC08 , FM08 , KTR67
TG108 , FL08 , DD626 , AK97
CL688 , PJ688 , YW688 , H801
ECO08 , SDR530

315/80R22.5 20PR	JILUTONG , SAFECESS , FIREMAX KPATOS , TRANSKING , FIRELION DDYKING , RUNTEK , CROWN , PANJI YUWANG , GAOLICHENG , HUNTERROAD ECDSTAR , <u>SUNWIDE</u>	LH688 , SFC08 , FM08 KTR67 , TG108 , FL08 DD626 , AK97 , CL688 , PJ688 YW688 , LH688 , H801 ECO08 , <u>SDR530</u>	156/153	L	T/L	1076	312	229.0	23.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Tread pattern: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; PJ688; YW688; H801; ECO08; SDR530

The sample of drawings or photographs of the tyre sidewall:

15	TRACTION
14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 3850kg (7600 LBS) AT 900 kpa (130 PSI) COLD MAX LOAD DUAL 3850 kg (7165 LBS) AT 900 kpa (130 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	CE XXXXX
9	295/80R22.5 152/149L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

295/80R22.5 18PR	JILUTONG, SAFECESS, FIREMAX, KPATOS, TRANSKING, FIRELION, ODYKING, RUNTEK, CROWN, PANJI, YUWANG, GADLICHENG, HUNTERROAD, ECDSTAR, <u>SUNWIDE</u>	LH688, SFC08, FM08, KTR67, TG108, FL08, DD626, AK97, CL688, PJ688, YW688, H801, ECO08, <u>SDR530</u>	152/149	L	T/L	1044	298	220	22
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						



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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/12*1090*04**

Nº de extensión / *Extension No.*: **04**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

- | | | |
|------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang City, Shandong
Province (CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas / <i>Snow
tyre for use in severe snow conditions</i> | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : radial / radial |
| 6. | Designación de tipo de neumático / <i>Tyre type designation</i> | : LH399 |
| 6.1. | Marca(s) / <i>Brand name(s)/Trademark(s)</i> | : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; RUNTEK;
HUNTERROAD; ECOSTAR |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.2. Denominación(es) comercial(es)/ *Trade description(s)/Commercial name(s) of the type of tyre* : LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ *Technical service approved for purposes of approval or of verification of conformity tests* : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / *Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾*
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 72 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / *Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 72 dB(A) at reference speed of 70/80 km/h ⁽²⁾*
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,24 (G) mediante el método de vehículo o de remolque ⁽²⁾ / *Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.24 (G) using the vehicle or trailer ⁽²⁾ method*
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6 4,66 N/kN / *Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6 4.66 N/kN*
- 8.4. Nivel de adherencia sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7 N/A (Índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / *Snow grip level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (Snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾*
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CV15090442; CV16100662; CV18070698; CV18080074; CN19070752; CN21090765
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 30/09/2015; 20/10/2016; 26/07/2018; 02/08/2018; 29/07/2019; 28/09/2021

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





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11. Motivo(s) de la extensión (en su caso) /
Reason(s) of extension (if applicable) : Ver informe de ensayo número CN21090765 / *See Test Report Number CN21090765*
12. Observaciones /
Any remarks : N/A
13. Lugar /
Place : Madrid
14. Fecha/
Date : Ver firma electrónica /
See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación /*Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾*
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/Commercial name the list of tyre size designations and Service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

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⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*



**INFORME/REPORT N° CN21090765**

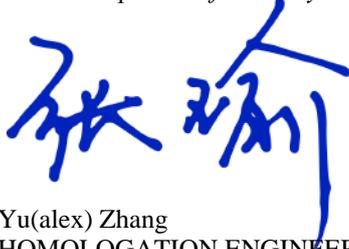
REGLAMENTO CEPE/ONU 117R02/12 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN IV
UN/ECE REGULATION 117R02/12 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION IV

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: No / No
Marca / Brand name	: JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR
Nombre comercial / Commercial name	: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Designación de tipo de neumático / Tyre type designation	: LH399
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 28/09/2021

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO CEPE/ONU 117R02/12 Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to UN/ECE REGULATION 117R02/12 The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Yu(alex) Zhang
HOMOLOGATION ENGINEER

V.B°. / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN21090765

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica
: *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/80R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15050967, IDIADA, 05/06/2015
See Annex 1, Test report CV15050967, IDIADA, 05/06/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 11R22.5 146/143L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15050971, IDIADA, 10/06/2015
See Annex 2, Test report CV15050971, IDIADA, 10/06/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 11R22.5 146/143L (menor índice de carga / *lowest load index*)
Ver Anexo 3, Informe CV15050978, IDIADA, 04/06/2015
See Annex 3, Test report CV15050978, IDIADA, 04/06/2015
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 28/09/2021



Yu (alex) Zhang
HOMOLOGATION ENGINEER

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ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15050967/ ROLLING SOUND EMISSIONS CV15050967

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_i [kPa] / Test inflation pressure P_i [kPa] :

	P_i [kPa] valor admisible / P_i [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	629,57 ≤ 690,00 ≤ 692,52
Rueda derecha del eje delantero / Front axle right wheel	627,82 ≤ 685,00 ≤ 690,60
Rueda izquierda del eje trasero / Rear axle left wheel	611,86 ≤ 670,00 ≤ 673,04
Rueda derecha del eje trasero / Rear axle right wheel	616,09 ≤ 675,00 ≤ 677,70

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CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1505/666	HVI-1505/667

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1505/668	HVI-1505/669

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1203/17	HVI-1205/1601

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/1599	HVI-1205/681

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	3.146	50 < 78,65 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	3.139	50 < 78,48 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.075	50 < 76,88 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.092	50 < 77,30 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 77,83 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

- 1.2.6 Referencia interna del vehículo / Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 10246
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto / Track temperature measurement device : 141537
- 1.3.6 Anemómetro / Wind speed measurement device : 150095
- 1.3.7 Velocímetro / Speed measurement device : 130204
- 1.3.8 Termómetro de la temperatura ambiente / Ambient temperature measurement device : 10004

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 33,3
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.2. Temperatura de la superficie de ensayo [°C]: 43,5
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.3 Velocidad del viento [m/s] / : 2,5
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.4 Ruido ambiente [dB(A)] / : 45,8
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.5 Presión barométrica [kPa] / : 100,79
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 21,84
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 233,3
Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:1994 /
 Date and method of check on compliance of the test surface with ISO 10844:1994:**

- 25 de mayo de 2015 / *May 25th 2015*

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- Emitido por / *Issued by* : IDIADA
3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,4	W → E	72,5	72,0	33,1	42,7	72,5	72,0
2	64,3	W → E	72,5	72,6	33,0	43,1	72,5	72,6
3	66,7	W → E	73,2	72,9	33,6	43,2	73,2	72,9
4	68,8	W → E	73,0	72,9	33,6	43,1	73,0	72,9
5	72,9	W → E	74,6	73,9	33,1	42,9	74,6	73,9
6	74,6	W → E	74,6	73,9	32,8	44,6	74,6	73,9
7	76,5	W → E	74,9	74,2	33,9	44,1	74,9	74,2
8	78,3	W → E	75,0	74,1	33,3	43,9	75,0	74,1

- 3.1. Pendiente de la recta de regresión / : 25,50
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] /
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 73,5
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / *Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]* : 72
- 3.4. Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) /
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)
 Fecha de ensayo / *Date of test*: 05/06/2015



Yu (alex) Zhang
 HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15050971 / ADHESION ON WET SURFACES CV15050971

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 11R22.5 146/143L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 146 / 3.000
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 825
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI- 1505/662	HVI-1505/663

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1505/664	HVI-1505/665

- 1.1.12 Llanta de ensayo / Test rim : 8,25 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1203/131	HVI-1205/690

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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1205/701	HVI-1205/700

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IDIADA CN21090765

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1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1204/01	HVI-1204/02
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1204/03	HVI-1204/04

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7,50 x 19,5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/249	HVI-1206/252
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/250	HVI-1206/251

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load [kg]* :

SRTT 1			Candidate			SRTT 2		
DI / FL	2,073	92,5% Q _r	DI / FL	2,110	70,3% Q _r	DI / FL	2,070	92,4% Q _r
DD / FR	2,005	89,5% Q _r	DD / FR	2,051	68,4% Q _r	DD / FR	2,009	89,7% Q _r
TI / RL	1,849	82,5% Q _r	TI / RL	1,895	63,2% Q _r	TI / RL	1,852	82,7% Q _r
TD / RR	1,866	83,3% Q _r	TD / RR	1,900	63,3% Q _r	TD / RR	1,870	83,5% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Modelo / Model	: PREMIUM
1.2.3	Año / Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo Vehicle internal reference	: HVI-1205/352
1.2.7	Configuración del vehículo (ISO 15222) / Vehicle configuration (ISO 15222)	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / Configuration 1 (4 candidate tyres in test vehicle

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	690	662	598	605
SRTT 2	689	663	599	606

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
DI / FL	2.110	3.000	1- Si / If Q _t < 75% Q _r entonces / then: $P_t = (0.7) \times P_r$	1	578
DD / FR	2.051	3.000		1	578
TI / RL	1.895	3.000	2- Si / If Q _t ≥ 75% Q _r entonces / then: $P_t = P_r \times (Q_t / Q_r)^{1.25}$	1	578
TD / RR	1.900	3.000		1	578

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140070
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 130665
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 06349
- 1.4.5 Dispositivo para medir la velocidad / *Temperature measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
 THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / *Location* : Pista ABS / *ABS Surface*, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / *Date of check on compliance of the test surface* : 19 de Abril de 2014 / April 19th 2014
- 2.3. Características de la pista de ensayo / *Test track characteristics*
 - 2.3.1 Profundidad grano de arena / *Sand depth* [mm] : 0,85
 - 2.3.2 BPN : 55
 - 2.3.3 Profundidad del agua / *Water depth* [mm] : Entre 0,75 a 1,00 / *Between 0.75 and 1.00*
- 2.4. Método de ensayo / *Test method* : Vehículo / *Vehicle*
- 2.5. Temperatura del aire T_a [°C] / *Air temperature T_a [°C]* : 28,0
- 2.6. Temperatura de la pista de ensayo T_w [°C] / *Wet surface temperature T_w [°C]* :
 $5,0 \leq T_w \leq 35,0$

SRTT 1	Candidato / <i>Candidate</i>	SRTT 2
21,8	23,6	29,4

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

Validate this report with the security code « UJ09VVHJ » at: <https://extranet.idiada.com/hom-cve>

CN21090765



* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	26,50	4,66	21,52	5,74	29,98	4,12
2	26,54	4,65	22,45	5,50	28,65	4,31
3	26,51	4,66	22,31	5,53	29,24	4,22
4	-	-	21,32	5,79	-	-
5	-	-	22,65	5,45	-	-
6	-	-	22,32	5,53	-	-

Coeficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
0,08	2,48	2,27
< 3%	< 3%	< 3%

CUMPLE / NO-CUMPLE
FULFILS / NOT FULFILS

Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	BFC(R)	BFC(T)	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19,5	---	4,66 m/s ²	---	---	> 600
2	60 - 20	W - E	---	11R22,5	5,59 m/s ²	0,46	0,57	> 600
4	60 - 20	W - E	245/70R19,5	---	4,22 m/s ²	---	---	> 600

Cálculo del índice de adherencia en mojado del neumático candidato / Calculation of the wet grip index of the candidate tyre:

$$G(T) = \left[\frac{BFC(T)}{BFC(R)} \times 125 + a \times (t - t_0) + b \times \left(\frac{BFC(R)}{BFC(R_0)} - 1,0 \right) \right] \times 10^{-2}$$

Donde / where:

a = -0,4232

b = -8,297

 t₀ = 20°C

 BFC(R₀) = 0,68

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

G (T) = 1,24

Índice de adherencia en mojado (para el peor caso)

Wet grip index (Worst case) $\geq 0,80$

Índice de adherencia en mojado (cualquier medida)

Wet grip index (Any size) $\geq 0,88$

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 10/06/2015

Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15050978 / ROLLING RESISTANCE CV15050978

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 11R22.5 146/143L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 146 / 3.000
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 830
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1505/661
- 1.1.12 Llanta de ensayo / Test rim : 8,25 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1201/163
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / *Identification* : AMB-1000RRH

1.2.2 Diámetro de tambor / *Drum diameter* [mm] : 1.700

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.2.3 Superficie / *Surface* : Acero liso / *Smooth steel*

1.2.4 Rugosidad / *Roughness* [µm] : ≤ 6,3

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / *Measurement method* : Par / *Torque*

1.3.2 Velocidad de ensayo / *Test speed* [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3.3 Índice de carga (LI) / Carga [kg] : 146 / 3.000
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / *Test load* [kg / N] : 2.550 / 25.015,5

C2/C3 (% of single load): 85 (*)
(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3.5 Presión de ensayo [kPa] / : 830
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple
(*) : presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.
C2/C3: corresponding to maximum load capacity for single application (*)
(*) : inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

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CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,00
 $20,0 \leq T_{am} \leq 30,0$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4
 $C3 \leq 500$ N

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (T_t) [Nm] / *Input load torque* (T_t) [Nm] : 135,52

1.3.10 Par en skim test (T_{pl}) [Nm] / *Input skim test torque* (T_{pl}) [Nm] : 33,53

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2. RESULTADOS DE ENSAYO / TEST RESULTS

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 4,79
- 2.1.2 Valor corregido por temperatura / : 4,80
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 4,66
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 4,66

2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 04/06/2015

Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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TECHNICAL DOCUMENTATION

INFORMATION DOCUMENT NO. E9*117R02/12*1090*04

According to ECE-Regulation

**UNIFORM PROVISIONS CONCERNING THE APPROVAL OF TYRES WITH REGARD TO
ROLLING SOUND EMISSIONS AND/OR TO ADHENSION ON WET SURFACES AND/OR TO
ROLLING RESISTANCE ACCORDING TO ECE-R117.02 SERIES OF ADMENDMENTS**

ECE Regulation 117

Tread pattern:

LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77;
H612; ECO66; SHW210

This model information document consists of page 1~7

Date: 09/17/2021
Extension: 04

IDIADA CN21090765

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

GENERAL INFORMATION

1 GENERAL

- 1.1 Manufacturer's name and address : WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.2 Name and address of manufacturing plant(s) : WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.3 Brand name(s), Trade description(s) or Trade mark(s) to be used for particular tyre type-approval requested : Brand name: JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210
- 1.4 Type of tyre : LH399

2 TYRE

- 2.1 Tyre classification (class C1, C2, C3) : ~~Class C1~~ / ~~Class C2~~ / Class C3
- 2.2 Tyre structure : ~~diagonal~~ / ~~bias belted~~ / radial
- 2.3 For class C1 tyre , state whether
- 2.3.1.1 Reinforced (or extra load) in case of approval with regarding to rolling sound mission level : see the attached list of Tyre sizes
- 2.3.1.2 Speed category symbol "Q" or below (not including "H") or "R" and above (including "H") in case of snow tyres for approval with regarding to adhesion on wet surfaces : see the attached list of Tyre sizes
- 2.4 For class C2, C3 tyre , state whether
- 2.4.1 Traction tyre : ~~Yes~~ / No
- 2.5. Category of use(normal, snow, special) : normal / ~~snow~~ / ~~special~~
- 2.5.1 Snow tyre for use in severe snow conditions : ~~Yes~~ / No
- 2.6. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. This may be by means of descriptions supplemented by technical data, drawings, photographs and Computer Tomography (CT), and must be sufficient to allow the Type Approval Authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance : Refer to f drawing of the tread pattern

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

- 2.7. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : See attachment drawings of the tyre sidewall

List of attachment:

List of Tyre designation sizes	page 3
Drawing of the tread pattern (for test representative tyres)	page 4-5
The drawings of the tyre sidewall	page 6-7

List of Tyre designation sizes

Brand name or Trade mark: JILUTONG; RICHWAY; ODYKING; TRANSKING; SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR
Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

No.	Tyre size	Standard/ Extra load	load	Speed	Approval Number
1	11R22.5	Standard	146/143	L	E9-00.1005
2	<u>11R22.5</u>	<u>Standard</u>	<u>149/146</u>	<u>L</u>	<u>E9-00.6171</u>
3	12R22.5	Standard	152/149	L	E9-00.1006
4	295/80R22.5	Standard	152/149	L	E9-00.1008
5	315/80R22.5	Standard	154/151	L	E9-00.1009
6	315/80R22.5	Standard	156/153	L	E9-00.1067

The worst case for Rolling sound emission test:

TEST SIZE : 315/80R22.5 156/153L

Because of : Largest section width (if the same section width: lowest aspect ratio; largest rim size)

The worst case for Wet adhesion level test:

TEST SIZE : 11R22.5 146/143L

Because of : Any tyre size that meets ten percent (10%) or more above the minimum required wet grip value can represent the whole tyre size range of the tread pattern type.

For any tyre size the limited value for the test tire meet or above: 0.88

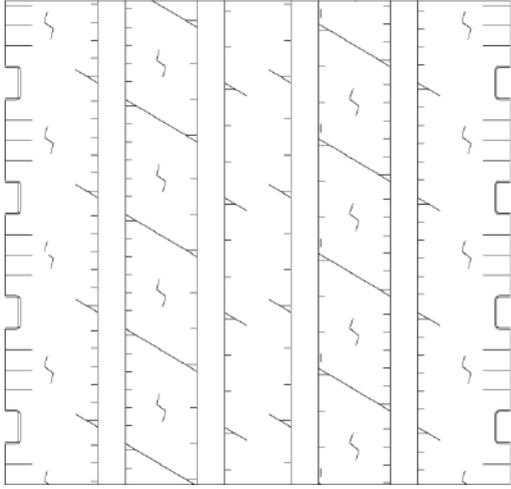
The worst case for Rolling resistance test:

TEST SIZE : 11R22.5 146/143L

Because of : Lowest load index

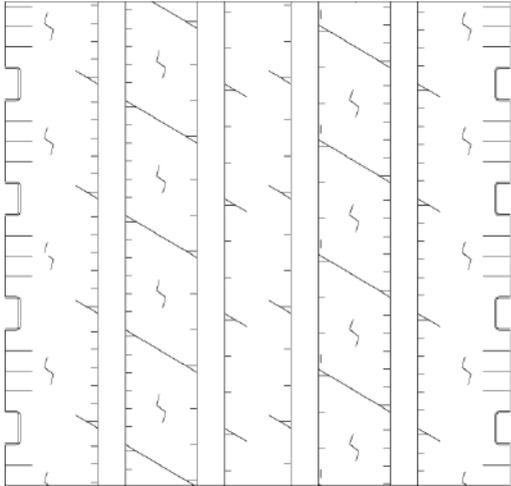
Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Tyre Size	315/80R22.5 156/153L
Market	EU
Pitch number	62
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	74%
Width: main grooves [mm]	12.5
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0
Detail drawing of tread pattern	

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Tyre Size	11R22.5 146/143L
Market	EU
Pitch number	65
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	74%
Width: main grooves [mm]	12.0
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0
Detail drawing of tread pattern	

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

The sample of drawings or photographs of the tyre sidewall:

14	PLIES: SIDEWALL 1 STEEL, TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8820 LBS) AT 850 kpa (123 PSI) COLD MAX LOAD DUAL 3650kg (8050 LBS) AT 850 kpa (123 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ xxxxxx
9	315/80R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/80R22.5 20PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATDS CROWN, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH399, RW786, OD176 TG866, SFC66, SFC66 FL66, S399, PJ399 YW399, FM66, KTL02 CL399, AK77, H612 ECO66, SHW210	156/153	L	T/L	1076	312	229.0	15.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

The sample of drawings or photographs of the tyre sidewall:

14	PLIES SIDEWALL 1 STEEL; TREAD 1 STEEL+STEEL MAX LOAD SINGLE 3000kg (6610 LBS) AT 830 kpa (120 PSI) COLD MAX LOAD DUAL 2725kg (6005 LBS) AT 830 kpa (120 PSI) COLD
13	STANDARD RIM 8.25
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	11R22.5 146/143L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

LH399, RW786, OD176, TG866
SFC66, FL66, S399, PJ399
YW399, FM66, KTL02, CL399
AK77, H612, ECO66, SHW210

11R22.5 16PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATDS CROWN, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH399, RW786, OD176 TG866, SFC66, SFC66 FL66, S399, PJ399 YW399, FM66, KTL02 CL399, AK77, H612 ECO66, SHW210	146/143	L	T/L	1050	279	208.4	15.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						



(1)

E9*117R02/14*1145*04

Página / Page 1 / 3

Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1145*04**

Nº de extensión / *Extension No.*: **04**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23071167

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : Si / Yes |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : LH688 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





(1)

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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; XCENT; AVENTUS
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 75 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 75 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.01 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5:1.01 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5.64 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 5.64 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el ~~método de frenado sobre nieve, método de tracción giratoria o método de aceleración~~ ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using ~~the brake on snow method, spin traction method or acceleration method~~ ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CN17110405; CN18070375; CN19070754; CN21090767; **CN23071167**
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 28/11/2017; 19/07/2018; 29/07/2019; 28/09/2021; **21/08/2023**
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23071167 / *See Test Report Number CN23071167*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23071167****REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN IV
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION IV**

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: Sí / Yes
Designación de tipo de neumático / Tyre type designation	: LH688
Marca / Brand name	: JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; XCENT; AVENTUS
Nombre comercial / Commercial name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; EL969; VDR530
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 21/08/2023

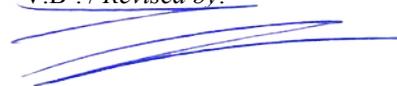
CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.B° / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



INFORME/REPORT N° CN23071167

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/70R22.5 154/151L (mayor ancho de sección, relación de aspecto más baja / *widest section width, lowest aspect ratio*).
Ver Anexo 1, Informe CN23070659, IDIADA, 17/08/2023
See Annex 1, Test report CN23070659, IDIADA, 17/08/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 295/80R22.5 152/149L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN16120066, IDIADA, 08/11/2016
See Annex 2, Test report CN16120066, IDIADA, 08/11/2016
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 295/80R22.5 152/149L (cumple el nuevo valor límite calculado / *meets new calculated limit value*)
Ver Anexo 3, Informe CN16110065, IDIADA, 27/10/2016
See Annex 3, Test report CN16110065, IDIADA, 27/10/2016
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extensión (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas marcas / *Addition of new brand names*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
 - Exclusión de marcas / *Deletion of brand names*
 - Exclusión de nombres comerciales / *Deletion of trade descriptions*
 - Actualización del número de suplemento reglamentario / *Upgrade of the regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 21/08/2023



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*
 * EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANNEX 1

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167





REPORT No. CN23070659

UN REGULATION No. 117R02/14 RELATED TO ROLLING SOUND EMISSIONS

Applicant : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China

Manufacturer : WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD.
Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)

Tyre class : C3

Category of use : Normal

Tyre for use in severe snow conditions : No

Traction tyre : Yes

Brand name / Trade mark : FIREMAX

Trade description/ Commercial name : FM08

Tyre size : 315/70R22.5 154/151L

Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 17/08/2023

CONCLUSIONS: The samples of the family have been tested according to the technical prescriptions with regard to "rolling sound emissions level" pursuant to UN Regulation No. 117R02/14. The characteristics of the tested samples are detailed in the annex to the test report.

Performed by:

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



ANNEX TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23070659

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Normal
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: Yes
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM08
1.1.9	Tyre size	: 315/70R22.5 154/151L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 154 / 3,750
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 2723, 2TWLJLA31
1.1.13	Reference inflation pressure P _r [kPa]	: 930

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2694

Validate this report with the security code «30X4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23070659



* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$633.41 \leq 640.00 \leq 696.75$
Front axle right wheel	$599.72 \leq 600.00 \leq 659.69$
Rear axle left wheel	$639.73 \leq 640.00 \leq 703.71$
Rear axle right wheel	$651.84 \leq 660.00 \leq 717.02$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2308/02276-01	CN-2308/02276-02

Rear left	Rear right
CN-2308/02276-03	CN-2308/02276-04

1.1.16 Test rim : 9.00 x 22.5

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02745-01	CN-1912/02745-02

Rear left	Rear right
CN-1912/02745-03	CN-1912/02745-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	2,758	$50 < 73.55 < 90$
Front axle right wheel	2,640	$50 < 70.40 < 90$
Rear axle left wheel	2,780	$50 < 74.13 < 90$
Rear axle right wheel	2,822	$50 < 75.25 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 73.33 \leq 80$

FULFILS / NOT FULFILS

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)

**1.2. Test vehicle**

1.2.1	Trade name	: HYUNDAI
1.2.2	Model	: XCIENT
1.2.3	Year	: 2019
1.2.4	Transmission	: Manual
1.2.5	Wheelbase [mm]	: 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

1.2.6	Vehicle internal reference	: CN-2001/01800
-------	----------------------------	-----------------

1.3. Test equipment

1.3.1	Sound level meter 1	: 193663
1.3.2	Sound level meter 2	: 193664
1.3.3	Manometer	: 193661
1.3.4	Weight scale	: 184618
1.3.5	Track temperature measurement device	: 182330
1.3.6	Wind speed measurement device	: 193666
1.3.7	Speed measurement device	: 035816
1.3.8	Ambient temperature measurement device	: 193659



2. TEST TRACK

2.1. Environment

2.1.1	Air temperature T_a [°C] $5.0 < T_a < 40.0$: 30.4	FULFILS / NOT FULFILS
2.1.2.	Test surface temperature T_s [°C] $5.0 \leq T_s \leq 50.0$: 37.0	FULFILS / NOT FULFILS
2.1.3	Wind speed [m/s] Less than 5 m/s	: 3.9	FULFILS / NOT FULFILS
2.1.4	Ambient noise [dB(A)] Test result – Ambient noise ≥ 10 dB(A)	: 35.5	FULFILS / NOT FULFILS
2.1.5	Wind direction [°]	: 125.0	

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 6th 2023
- Issued by : IDIADA

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2594

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23070467





3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	62.2	S → N	75.3	76.3	30.2	34.8	75.3	76.3
2	64.9	S → N	76.2	77.0	30.2	34.9	76.2	77.0
3	66.9	N → S	76.6	76.9	30.3	36.8	76.6	76.9
4	68.3	S → N	76.6	77.2	30.4	36.6	76.6	77.2
5	71.8	N → S	76.8	77.4	30.4	37.4	76.8	77.4
6	74.3	S → N	76.8	77.6	30.3	37.8	76.8	77.6
7	75.6	N → S	77.2	77.8	30.4	38.2	77.2	77.8
8	77.8	N → S	77.4	78.3	30.6	39.4	77.4	78.3

- 3.1. Regression line slope : 17.37
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 76.95
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2594

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 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 16/08/2023

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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* THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE



ANNEX 2

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167

IDIADA

**REPORT N° CN16120066**

UN/ECE REGULATION 117R02 RELATED TO ADHESION ON WET SURFACES

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECCESS

Commercial description : SFC08

Category of use : Normal

Tyre class : C3

Tyre size : 295/80R22.5 152/149L

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 08/11/2016

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “adhesion performance on wet surfaces” pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested samples are detailed in the annex to the test report.
Test configuration as per ISO 15222: *Configuration 1 (4 candidate tyres in test vehicle)*

Performed by:

Frank Yu
TEST ENGINEER

Revised by:

Lluís Sans Gomis
DEPARTMENT MANAGER



**ANNEX TO THE TEST REPORT
ADHESION ON WET SURFACES**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3,550
- 1.1.10 Reference pressure [kPa] : 900
- 1.1.11 Test tyre internal reference :

Front left	Front right
CN16120066-1	CN16120066-2

Rear left	Rear right
CN16120066-3	CN16120066-4

- 1.1.12 Test rim : 9.00 x 22.5
- 1.1.13 Test rim internal reference :

Front left	Front right
G-B227	G-B225

Rear left	Rear right
G-B226	G-B228

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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1.1.14 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 SRTT internal reference :

Front left	Front right
BW-FG-031	BW-FG-032

Rear left	Rear right
BW-FG-030	BW-FG-033

1.1.16 Test SRTT rim : 9.00 x 22.5

1.1.17 Test SRTT rim internal reference :

Front left	Front right
G-B229	G-B230

Rear left	Rear right
G-B231	G-B232

1.1.18 Test tyre load [kg] :

SRTT1			Candidate			SRTT2		
FL	2,994	79.8% Qr	FL	2,988	84.2% Qr	FL	3,002	80.1% Qr
FR	2,824	75.3% Qr	FR	2,858	80.5% Qr	FR	2,840	75.7% Qr
RL	2,818	75.1% Qr	RL	2,828	79.7% Qr	RL	2,818	75.1% Qr
RR	2,876	76.7% Qr	RR	2,878	81.1% Qr	RR	2,878	76.7% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

FULFILS / NOT FULFILS

1.2. Test vehicle

1.2.1 Trade name : SITRAK

1.2.2 Model : C7H400

1.2.3 Year : 2015

1.2.4 Transmission : Manual

1.2.5 Wheelbase [mm] : 3,600

1.2.6 Vehicle internal reference : SB-G-110

1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

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1.3. Test inflation pressure

1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	679	631	630	646
SRTT 2	682	636	630	646

1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	2,988	3,550	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	2	726
FR	2,858	3,550		2	686
RL	2,828	3,550	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	2	677
RR	2,878	3,550		2	692

1.4. Test equipment

- 1.4.1 Manometer : PCL DAC1C08C
- 1.4.2 Weight scale : SB-G-070
- 1.4.3 Thermometer : G-B029
- 1.4.4 Track temperature measurement device : G-B030
- 1.4.5 Speed measurement device : SB-G-109
- 1.4.6 Force pedal : SB-G-11



2. TEST TRACK

2.1. Location : ABS Surface, CATARC Yancheng

2.2. Date of check on compliance of the test surface: July 3rd 2015

2.3. Test track characteristics:

2.3.1 Sand depth [mm] : 0.98

2.3.2 BPN : 58.0

2.3.3 Water depth [mm] : Between 0.50 and 1.50

2.4. Test method : Vehicle

2.5. Air temperature T_a [°C] : 19.7

2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT1	Candidate	SRTT2
19.5	18.8	18.4

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS

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3. TEST RESULTS

Test run	SRTT 1		Candidate		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	23.02	5.36	22.70	5.44	22.57	5.47
2	23.02	5.36	23.10	5.34	22.87	5.40
3	22.55	5.47	22.54	5.48	22.44	5.50
4	-	-	21.72	5.68	-	-
5	-	-	22.39	5.51	-	-
6	-	-	22.80	5.41	-	-

Coefficient of variation

SRTT 1	Candidate Tyre	SRTT 2
1.20	2.11	0.97
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	N - S	315/70R22.5	---	5.40 m/s ²	---	> 600
3	60 - 20	N - S	---	295/80R22.5	5.48 m/s ²	1.01	> 600
4	60 - 20	N - S	315/70R22.5	---	5.46 m/s ²	---	> 600

Wet grip index G = 1.01

Wet grip index (Worst case) ≥ 0.80

Wet grip index (Any size) ≥ 0.88

FULFILS / NOT FULFILS



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Yancheng, China

Date of test: 08/11/2016

Frank Yu
TEST ENGINEER



ANNEX 3

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167

IDIADA

**REPORT N° CN16110065**

UN/ECE REGULATION 117R02 RELATED TO ROLLING RESISTANCE

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECESS

Commercial description : SFC08

Tyre Class : C3

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 27/10/2016

CONCLUSIONS: The tested sample of the family FULFILS the technical prescriptions with regard to "rolling resistance" pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested sample are detailed in the annex to the test report.

Performed by:

Revised by:

Frank Yu
TEST ENGINEERLluís Sans Gomis
DEPARTMENT MANAGER

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
* THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



**ANNEX TO THE TEST REPORT
UN/ECE REGULATION 117R02**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jiangnan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre Class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3550
- 1.1.10 Inflation pressure [kPa] : 900
- 1.1.11 Test tyre internal reference : 16-499
- 1.1.12 Test rim : 9.00 x 22.5"
- 1.1.13 Test rim internal reference : CTQI-01
- 1.1.14 Test rim material : Steel

1.2. Test machine data

- 1.2.1 Identification : B1037
- 1.2.2 Drum diameter [mm] : 1707.6
FULFILS/NOT FULFILS
- 1.2.3 Surface : Smooth steel
- 1.2.4 Roughness [μm] : ≤ 6.3
FULFILS/NOT FULFILS

Validate this report with the security code « 3OX4Y3NM » at: <https://extranet.idiada.com/hom-cve>

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1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121)

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 152 / 3550

1.3.4 Test load [kg / N] : 3,017.5 / 29,591.6

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

FULFILS/NOT FULFILS

1.3.5 Test inflation pressure, initial [kPa] : 900

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

FULFILS/NOT FULFILS

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.498

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.528

1.3.8 Ambient temperature T_{am} [°C] : 23.44

$20.0 \leq T_{am} \leq 30.0$

FULFILS/NOT FULFILS

1.3.9 Skim test load [N] : 397.51

$C3 \leq 500$ N

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 117.71

1.3.11 Spindle force during skim test (Ft) [N] : 7.86

1.3.12 Parasitic loss (Fpl) [N] : 12.72

1.3.13 Rolling resistance (Fr) [N] : 173.69

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2. TEST RESULTS

- 2.1. Rolling resistance coefficient
- 2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.87
- 2.1.2 Temperature corrected value [N/kN] : 5.81
- 2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.64

Rolling resistance coefficient C_r [N/kN] = 5.64

2.2. Limit value for the Class C3 tyre (Stage 2): 6.5 N/kN

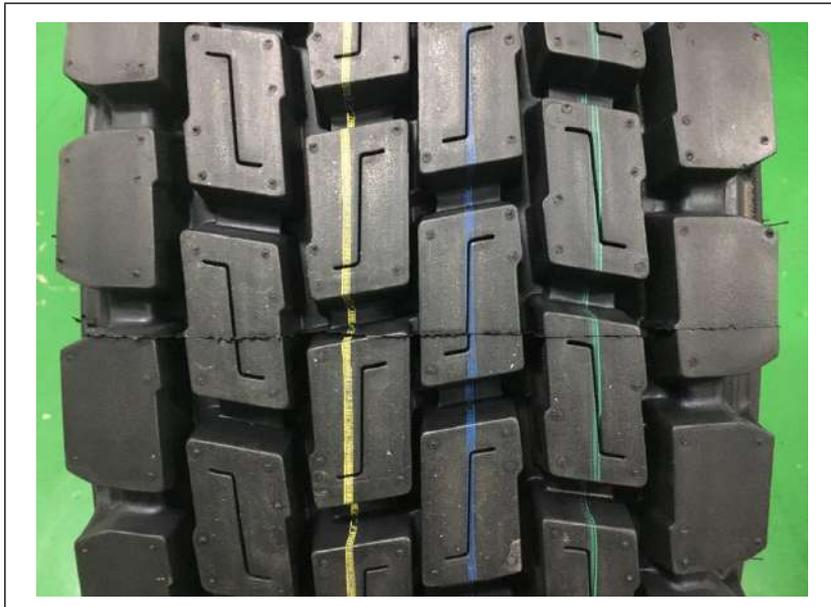
FULFILS / ~~NOT FULFILS~~



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Beijing, China

Date of test: 19/10/2016

Frank Yu
TEST ENGINEER

TECHNICAL DOCUMENTATION

Type of tyre:

LH688



Date : Aug 19, 2023

Ext. : 04

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT; AVENTUS**
 - 1.5. Trade description(s)/Commercial name(s) : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
 - 1.6. Type of tyre : LH688
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to Attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
 - 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

to in paragraph 4.

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT**; **AVENTUS**

Trade description(s)/Commercial name(s):

LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969**; **VDR530**

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound Db(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/Kn of Stage II	Limit for Snow grip index
1	E9-00.1005	11R22.5 146/143L	N.A.	75	0.65	6.5	N.A.
2	E9-00.6171	11R22.5 149/146L	N.A.	75	0.65	6.5	N.A.
3	<u>E9-00.1102</u>	<u>11R22.5 146/143M</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
4	E9-00.1006	12R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
5	E9-00.1008	295/80R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
6	E9-00.1009	315/80R22.5 154/151L	N.A.	75	0.65	6.5	N.A.
7	E9-00.1067	315/80R22.5 156/153L	N.A.	75	0.65	6.5	N.A.
8	<u>E9-00.6588</u>	<u>315/70R22.5 154/151L</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

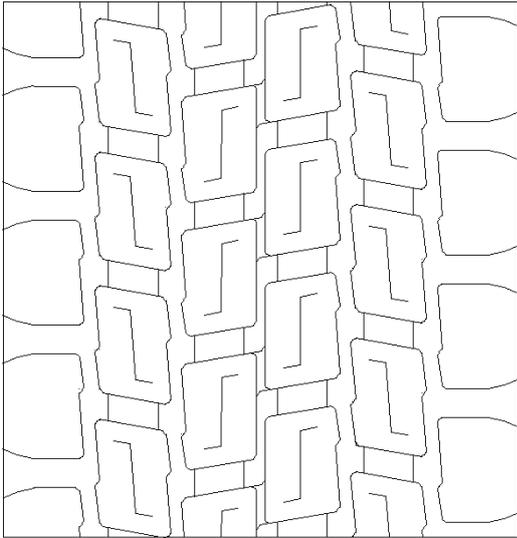
CN23071167

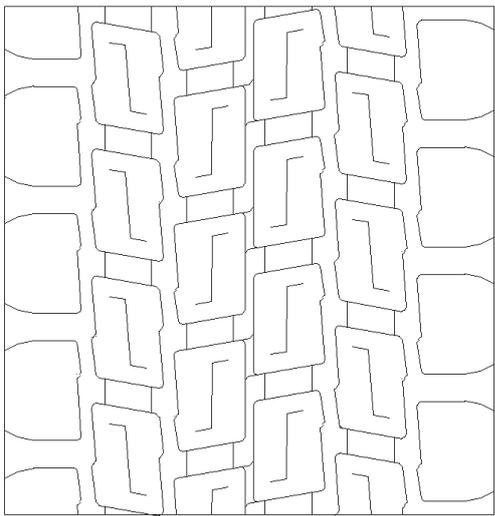
İİDİADÄ

Worst Case Selection

Test size for rolling sound	:	315/70R22.5 154/151L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	295/80R22.5 152/149L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.715 < 1.01$ (Wet grip test result)
Test size for rolling resistance	:	295/80R22.5 152/149L
Because of	:	Lowest load index; or Calculated limit value = $(RRC\text{-limit value } R117 - 0.3\#N/kN) - 0.06 * x$ (LI-candidate - LI-lowest) The new limit value is $5.84 > 5.64$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

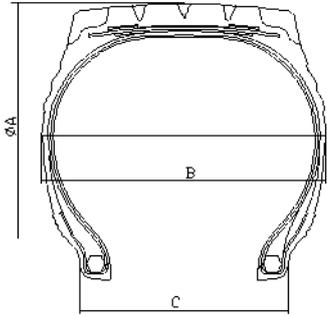
Attachment-2 Details of the major features

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 315/70R22.5 154/151L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 6.5
Depth: center groove [mm]	: 19.0
Depth: shoulder groove [mm]	: 19.0
Tyre mass [kg]	53.5
Tread depth [mm]	19.0
Tread width [mm]	248
Curvature radius of tread crown [mm]	965
Tyre outer diameter[mm]	1014
Tread plies	4STEEL
Tyre tread pattern	 <p style="text-align: center;">49 BLOCKS</p>

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 295/80R22.5 152/149L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 4.0
Depth: center groove [mm]	: 18.0
Depth: shoulder groove [mm]	: 18.0
Tyre mass [kg]	53.0
Tread depth [mm]	18.0
Tread width [mm]	224
Curvature radius of tread crown [mm]	697
Tyre outer diameter[mm]	1044
Tread plies	1STEEL+3STEEL
Tyre tread pattern	 <p>51 BLOCKS</p>

Attachment 3 Drawings or photographs of the tyre sidewall

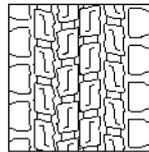
Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



LOWER MOLD



UPPER MOLD



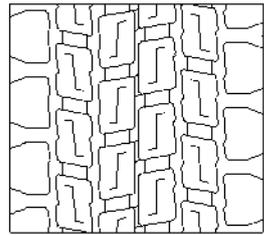
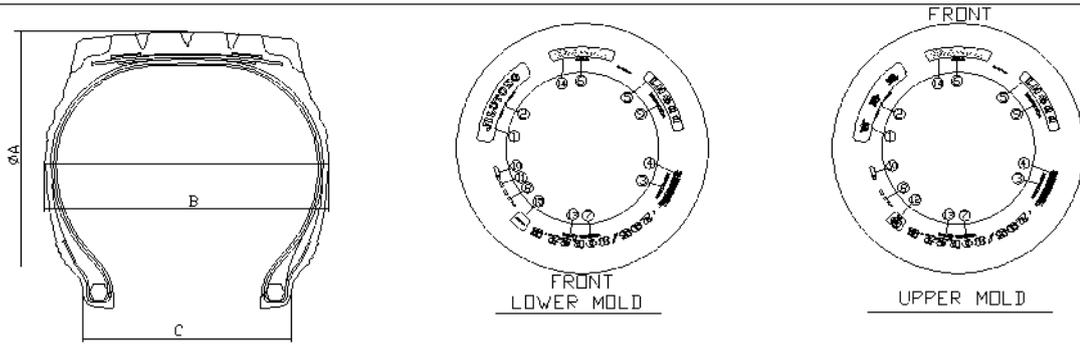
49 BLOCKS

LH688 , SFC08 , FM08
KTR67 , SDR530 , ECD08
H801 , VDR530 , EL969

15	TRACTION
14	PLIES SIDEWALL 1 STEEL TREAD 4 STEEL
14	MAX LOAD SINGLE 3750kg (8270 LBS) AT 930 kpa (135 PSI) COLD
14	MAX LOAD DUAL 3450kg (7610 LBS) AT 930 kpa (135 PSI) COLD
13	STANDARD RIM 9.00
12	CCC
11	DATE CODE XXXX
10	Ⓜ XXXXXX
9	315/70R22.5 154/151L
8	DOT XXXXXXXX
7	TUBE LESS
6	ALL STEEL RADIAL
5	TREAD DESCRIPTION
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/70R22.5 20PR	JILUTONG , SAFECESS , FIREMAX KPATOS , SUNWIDE , ECOSTAR HUNTERROAD , AVENTUS , XCENT	LH688 , SFC08 , FM08 KTR67 , SDR530 , ECD08 H801 , VDR530 , EL969	154/151	L	T/L	1014	312	228.6	19.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



51 BLOCKS

LH688, SFC08, FM08, KTR67
TG108, FL08, DD626, AK97
H801, ECC08, SDR530

15	TRACTION
14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 3500kg (7900 LBS) AT 300 kpa (4.30 PSI) COLD MAX LOAD DUPL 3200kg (7050 LBS) AT 300 kpa (4.30 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	Ⓔ XXXXXX
9	295/80R22.5 152/149L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

295/80R22.5 18PR	JILUTONG, SAFECESS, FIREMAX KPATOS, TRANSKING, FIRELION DDYKING, RUNTEK, HUNTERROAD ECCOSTAR, SUNWIDE	LH688, SFC08, FM08 KTR67, TG108, FL08 DD626, AK97, H801 ECC08, SDR530	152/149	L	T/L	1044	298	228.6	22
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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Relativa a / Concerning:

- homologación de tipo / *APPROVAL GRANTED* ⁽²⁾
- extensión de homologación de tipo / *APPROVAL EXTENDED* ⁽²⁾
- denegación de homologación de tipo / *APPROVAL REFUSED* ⁽²⁾
- retirada de homologación de tipo / *APPROVAL WITHDRAWN* ⁽²⁾
- producción definitivamente abandonada / *production definitively discontinued* ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1435*00**

Nº de extensión / *Extension No.*: **00**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : N/A

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : LH398 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; AVENTUS
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH398; SFC77; FM919; KT919; SHW200; VHW200
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (~~fase 1~~/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (~~fase 1~~/fase 2) ⁽²⁾ / Performances approved: sound level at (~~stage 1~~/stage 2), wet adhesion level, rolling resistance level (~~stage 1~~/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 70 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 70 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.06 (G) mediante el método de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.06 (G) using the vehicle or trailer ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5.257 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex: 6 5.257 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake-on-snow method, spin traction method or acceleration method ⁽²⁾
- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake-on-ice method. ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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9. Número de informe emitido por el Servicio Técnico / : CN23030467
Number of report issued by the Technical Service
10. Fecha del informe emitido por este Servicio / : 12/05/2023
Date of report issued by that service
11. Motivo(s) de la extensión (en su caso) / : N/A
Reason(s) of extension (if applicable)
12. Observaciones / : N/A
Any remarks
13. Lugar / : Madrid
Place
14. Fecha/ : Ver firma electrónica /
Date See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23030467****REGLAMENTO UN N° 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
UN REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE**

Solicitante / <i>Applicant</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / <i>Manufacturer</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / <i>Tyre Class</i>	: C3
Categoría de uso / <i>Category of use</i>	: Normal / <i>Normal</i>
Neumático de tracción / <i>Traction tyre</i>	: No / No
Designación de tipo de neumático / <i>Tyre type designation</i>	: LH398
Marca / <i>Brand name</i>	: JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; AVENTUS
Nombre comercial / <i>Commercial name</i>	: LH398; SFC77; FM919; KT919; SHW200; VHW200
Lugar y fecha de emisión del informe / <i>Place and date of issue</i>	: L'Albornar, Santa Oliva (Tarragona), 12/05/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO UN N° 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, El procedimiento de ensayo para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to Reglamento UN N° 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / *Performed by:*Zhu Yuan
HOMOLOGATION ENGINEERV.B° / *Revised by:*Josep Masip Gomez
DEPARTMENT MANAGER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

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RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/70R22.5 154/151L (mayor ancho de sección, relación de aspecto más baja / *widest section width, lowest aspect ratio*).
Ver Anexo 1, Informe CN23030068, IDIADA, 01/03/2023
See Annex 1, Test report CN23030068, IDIADA, 01/03/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 315/70R22.5 154/151L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN23030345, IDIADA, 09/03/2023
See Annex 2, Test report CN23030345, IDIADA, 09/03/2023
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 11R22.5 149/146L (menor índice de carga / *lowest load index*)
Ver Anexo 3, Informe CN23031598, IDIADA, 08/03/2023
See Annex 3, Test report CN23031598, IDIADA, 08/03/2023
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
- N/A
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 / *Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 12/05/2023



Zhu Yuan
HOMOLOGATION ENGINEER

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ANNEX 1 TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23030068

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Normal
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: No
1.1.7	Brand name / Trade mark	: SUNWiDE
1.1.8	Trade description / Commercial name	: SHW200
1.1.9	Tyre size	: 315/70R22.5 154/151L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 154 / 3,750
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 0123, 2TWLJLA31
1.1.13	Reference inflation pressure P _r [kPa]	: 850

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

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CN23030467





1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$654.38 \leq 660.00 \leq 719.82$
Front axle right wheel	$621.21 \leq 630.00 \leq 683.33$
Rear axle left wheel	$626.53 \leq 630.00 \leq 689.19$
Rear axle right wheel	$642.57 \leq 650.00 \leq 706.83$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2302/04581-01	CN-2302/04581-02

Rear left	Rear right
CN-2302/04581-03	CN-2302/04581-04

1.1.16 Test rim : 9.00 x 22.5

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02747-01	CN-1912/02747-02

Rear left	Rear right
CN-1912/02747-03	CN-1912/02747-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	3,042	$50 < 81.12 < 90$
Front axle right wheel	2,918	$50 < 77.81 < 90$
Rear axle left wheel	2,938	$50 < 78.35 < 90$
Rear axle right wheel	2,998	$50 < 79.95 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 79.31 \leq 80$

FULFILS / NOT FULFILS



1.2. Test vehicle

- 1.2.1 Trade name : HYUNDAI
- 1.2.2 Model : XCIENT
- 1.2.3 Year : 2019
- 1.2.4 Transmission : Manual
- 1.2.5 Wheelbase [mm] : 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

- 1.2.6 Vehicle internal reference : CN-2001/01800

1.3. Test equipment

- 1.3.1 Sound level meter 1 : 193663
- 1.3.2 Sound level meter 2 : 193664
- 1.3.3 Manometer : 27230
- 1.3.4 Weight scale : SCS-5 / SCS-10
- 1.3.5 Track temperature measurement device : 182330
- 1.3.6 Wind speed measurement device : 193666
- 1.3.7 Speed measurement device : 170358
- 1.3.8 Ambient temperature measurement device : 193659

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2. TEST TRACK

2.1. Environment

2.1.1 Air temperature T_a [°C] : 12.8
 $5.0 < T_a < 40.0$

FULFILS / NOT FULFILS

2.1.2. Test surface temperature T_s [°C] : 5.5
 $5.0 \leq T_s \leq 50.0$

FULFILS / NOT FULFILS

2.1.3 Wind speed [m/s] : 0.9
 Less than 5 m/s

FULFILS / NOT FULFILS

2.1.4 Ambient noise [dB(A)] : 41.2
 Test result – Ambient noise ≥ 10 dB(A)

FULFILS / NOT FULFILS

2.1.5 Wind direction [°] : 235.0

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 8th 2021
- Issued by : IDIADA

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3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	61.7	S → N	68.7	69.1	14.3	5.9	68.7	69.1
2	64.7	N → S	69.2	69.7	14.0	6.0	69.2	69.7
3	65.8	S → N	69.4	70.3	12.1	5.3	69.4	70.3
4	68.8	N → S	70.6	71.0	12.7	5.5	70.6	71.0
5	72.2	N → S	71.8	71.1	12.5	5.4	71.8	71.1
6	73.8	N → S	72.0	71.7	12.3	5.4	72.0	71.7
7	75.7	S → N	72.7	72.6	12.4	5.4	72.7	72.6
8	77.9	N → S	73.5	72.6	12.3	5.2	73.5	72.6

- 3.1. Regression line slope : 42.08
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 71.03
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 70
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 01/03/2023

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Zhu Yuan
HOMOLOGATION ENGINEER



ANNEX 2 TO THE TEST REPORT
ADHESION ON WET SURFACES, REPORT No. CN23030345

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant ⁽¹⁾ : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiuhan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
- 1.1.2 Manufacturer : WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD.
Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.3 Tyre class : C3
- 1.1.4 Category of use : Normal
- 1.1.5 Tyre for use in severe snow conditions : No
- 1.1.6 Traction tyre : No
- 1.1.7 Brand name / Trade mark : SUNWiDE
- 1.1.8 Trade description / Commercial name : SHW200
- 1.1.9 Tyre size : 315/70R22.5 154/151L
- 1.1.10 Load index / Corresponding mass Q_r [kg] : 154 / 3,750
- 1.1.11 Tyre structure : Radial
- 1.1.12 Date code, other manufacturer markings : 0123, 2TWLJLA31
- 1.1.13 Reference inflation pressure [kPa] : 850

⁽¹⁾ Information provided by the client. The laboratory is not responsible for such information

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IDIADA CN23030467



1.1.14 Test tyre internal reference :

Front left	Front right
CN-2302/04581-01	CN-2302/04581-02
Rear left	Rear right
CN-2302/04581-03	CN-2302/04581-04

1.1.15 Test rim : 9.00 x 22.5

1.1.16 Test rim internal reference :

Front left	Front right
CN-1912/02747-01	CN-1912/02747-02
Rear left	Rear right
CN-1912/02747-03	CN-1912/02747-04

1.1.17 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.18 SRTT internal reference :

Front left	Front right
CN-2204/01872-01	CN-2204/01872-02
Rear left	Rear right
CN-2204/01872-03	CN-2204/01872-04

1.1.19 Test SRTT rim : 9.00 x 22.5

1.1.20 Test SRTT rim internal reference :

Front left	Front right
CN-1912/02743-01	CN-1912/02743-02
Rear left	Rear right
CN-1912/02743-03	CN-1912/02743-04

1.1.21 Test tyre load [kg] :

SRTT 1			Candidate tyre			SRTT 2		
FL	3,250	86.7% Qr	FL	3,270	87.2% Qr	FL	3,248	86.6% Qr
FR	3,198	85.3% Qr	FR	3,156	84.2% Qr	FR	3,190	85.1% Qr
RL	3,250	86.7% Qr	RL	3,226	86.0% Qr	RL	3,254	86.8% Qr
RR	3,288	87.7% Qr	RR	3,298	87.9% Qr	RR	3,270	87.2% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

FULFILS / NOT FULFILS

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 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)


1.2. Test vehicle

- 1.2.1 Trade name : HYUNDAI
- 1.2.2 Model : XCIENT
- 1.2.3 Year : 2019
- 1.2.4 Transmission : Manual
- 1.2.5 Wheelbase [mm] : 3,560
- 1.2.6 Vehicle internal reference : CN-2001/01800
- 1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

1.3. Test inflation pressure

- 1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	753	738	753	764
SRTT 2	752	735	754	758

- 1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	3,270	3,750	1- If Q _t < 75% Q _r then: $P_t = (0.7) \times P_r$	2	716
FR	3,156	3,750		2	685
RL	3,226	3,750	2- If Q _t ≥ 75% Q _r then: $P_t = P_r \times (Q_t / Q_r)^{1.25}$	2	704
RR	3,298	3,750		2	724



1.4. Test equipment

- 1.4.1 Manometer : 27230
- 1.4.2 Weight scale : SCS-5/ SCS-10
- 1.4.3 Thermometer : 182330
- 1.4.4 Track temperature measurement device : 182329
- 1.4.5 Speed measurement device : VBOX Sport 07013178
- 1.5.6 Brake system pressure transducer : 19-2039-07

2. TEST TRACK

- 2.1. Location : Straight line braking B, ICPG
- 2.2. Date of check on compliance of the test surface : April 1st 2022
- 2.3. Test track characteristics:
 - 2.3.1 Texture depth [mm] : 0.86
 - 2.3.2 PBC : 0.71 and 0.72
 - 2.3.3 Water depth [mm] : Average of 1.18
- 2.4. Test method : Vehicle
- 2.5. Air temperature T_a [°C] : 15.2
- 2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT 1	Candidate tyre	SRTT 2
6.5	7.7	16.3

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS



3. TEST RESULTS

Test run	SRTT 1		Candidate tyre		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	29.20	4.23	27.73	4.45	29.84	4.14
2	29.64	4.17	27.60	4.47	29.47	4.19
3	29.07	4.25	27.44	4.50	29.75	4.15
4	-	-	27.82	4.44	-	-
5	-	-	27.54	4.48	-	-
6	-	-	28.24	4.37	-	-

Coefficient of variation

SRTT 1	Candidate tyre	SRTT 2
1.01	1.02	0.65
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	S - N	315/70R22.5	---	4.21 m/s ²	---	> 600
2	60 - 20	S - N	---	315/70R22.5	4.45 m/s ²	1.06	> 600
4	60 - 20	S - N	315/70R22.5	---	4.16 m/s ²	---	> 600

Wet grip index G = 1.06

3.1. Limit value

Category of use	Wet Grip Index (+10% Wet Grip Index) (G)			
	C2		C3	
	Other	Traction	Other	Traction
Normal	≥ 0.95 (≥ 1.05)	≥ 0.85 (≥ 0.94)	≥ 0.80 (≥ 0.88)	≥ 0.65 (≥ 0.72)
Snow			≥ 0.65 (≥ 0.72)	
Snow in severe conditions	≥ 0.85 (≥ 0.94)	≥ 0.85 (≥ 0.94)	≥ 0.65 (≥ 0.72)	≥ 0.65 (≥ 0.72)
Special			≥ 0.65 (≥ 0.72)	



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 09/03/2023

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Zhu Yuan
HOMOLOGATION ENGINEER



ANNEX 3 TO THE TEST REPORT
ROLLING RESISTANCE, REPORT N° CN23031598

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant ⁽¹⁾ : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
 Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
- 1.1.2 Manufacturer ⁽¹⁾ : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
 (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.3 Tyre class : C3
- 1.1.4 Category of use : Normal
- 1.1.5 Tyre for use in severe snow conditions : N/A
- 1.1.6 Traction tyre : N/A
- 1.1.7 Brand name / Trade mark : AVENTUS
- 1.1.8 Trade description / Commercial name : VHW200
- 1.1.9 Tyre size : 11R22.5 149/146L
- 1.1.10 Load index / Corresponding mass Q_r [kg] : 149 / 3,250
- 1.1.11 Tyre structure : Radial
- 1.1.12 Date code, other manufacturer markings : 0723
- 1.1.13 Inflation pressure [kPa] : 930
- 1.1.14 Test tyre internal reference : CN23031598
- 1.1.15 Test rim : 8.25 x 22.5
- 1.1.16 Test rim internal reference : 8.25 x 22.5
- 1.1.17 Test rim material : Aluminium

(1) Information provided by the client. The laboratory is not responsible for such information

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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1.2. Test machine data

1.2.1 Identification : 04-1086, 04-807

1.2.2 Drum diameter [mm] : 1,707.6

FULFILS/NOT FULFILS

1.2.3 Surface : Smooth steel

1.2.4 Roughness [μm] : ≤ 6.3

FULFILS/NOT FULFILS

1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 149 / 3,250

1.3.4 Test load [kg / N] : 2,762.5 / 27,091

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load, or 85 per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre.

FULFILS/NOT FULFILS

1.3.5 Test inflation pressure, initial [kPa] : 930

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals corresponding to maximum load capacity for single application.

FULFILS/NOT FULFILS

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.498

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.525

1.3.8 Ambient temperature T_{am} [°C] : 24.87

$20.0 \leq T_{am} \leq 30.0$

FULFILS/NOT FULFILS

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1.3.9 Skim test load [N] : 400.007

C3 ≤ 500 N

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 98.722

1.3.11 Spindle force during skim test (Ft) [N] : 5.916

1.3.12 Parasitic loss (Fpl) [N] : 9.556

1.3.13 Rolling resistance (Fr) [N] : 146.695

2. TEST RESULTS

2.1. Rolling resistance coefficient

2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.415

2.1.2 Temperature corrected value [N/kN] : 5.410

2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.257

Rolling resistance coefficient Cr [N/kN] = 5.257

2.2. Limit value [N/kN]

	Stage 1	Stage 2
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

For "snow tyre for use in severe snow conditions", the limits shall be increased by 1 N/kN.

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3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Qingdao Product Quality Testing Research Institute (Qingdao, China)

Date of test: 08/03/2023

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HOMOLOGATION ENGINEER

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TECHNICAL DOCUMENTATION

Type of tyre:

LH398



Date : Apr 27, 2023

Ext. : 00

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; AVENTUS
 - 1.5. Trade description(s)/Commercial name(s) : LH398; SFC77; FM919; KT919; SHW200; VHW200
 - 1.6. Type of tyre : LH398
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
 - 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; AVENTUS

Trade description(s)/Commercial name(s):

LH398; SFC77; FM919; KT919; SHW200; VHW200

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.6588	315/70R22.5 154/151L	N.A.	73	0.8	6.5	N.A.
2	E9-00.6171	11R22.5 149/146L	N.A.	73	0.8	6.5	N.A.
3	E9-00.1006	12R22.5 152/149L	N.A.	73	0.8	6.5	N.A.
4	E9-00.1008	295/80R22.5 152/149L	N.A.	73	0.8	6.5	N.A.
5	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.8	6.5	N.A.
6							
7							
8							
9							
10							
11							
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13							
14							
15							
16							
17							
18							
19							
20							

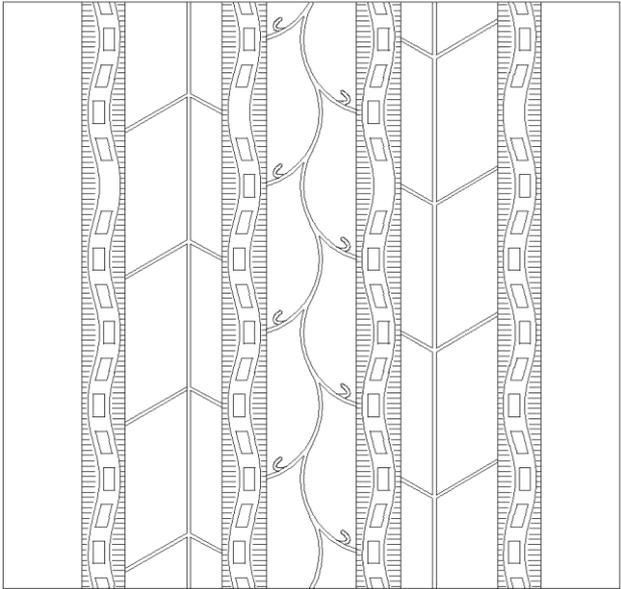
CN23030467

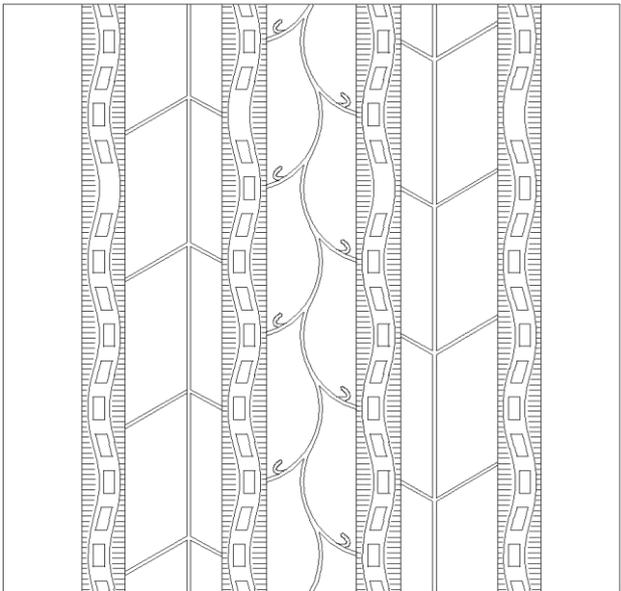
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Worst Case Selection

Test size for rolling sound	:	315/70R22.5 154/151L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	315/70R22.5 154/151L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.06$ (Wet grip test result)
Test size for rolling resistance	:	11R22.5 149/146L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3[#]N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

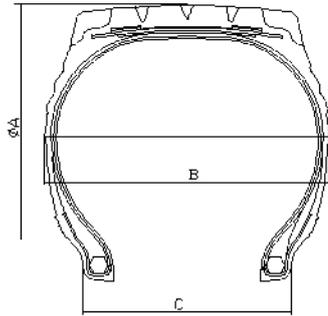
Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH398; SFC77; FM919; KT919; SHW200; VHW200
Tyre Size	: 315/70R22.5 154/151L
Market	: EU
Pitch number	: 68
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 26%
Width: main grooves [mm]	: 13.5
Depth: center groove [mm]	: 14.0
Depth: shoulder groove [mm]	: 14.0
Tyre mass [kg]	52.0
Tread depth [mm]	14.0
Tread width [mm]	228
Curvature radius of tread crown [mm]	816
Tyre outer diameter[mm]	1010
Tread plies	4 PLIES STEEL
Tyre tread pattern	

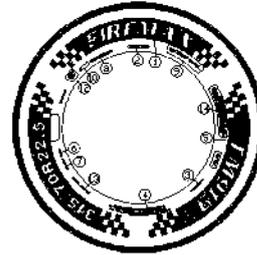
Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH398; SFC77; FM919; KT919; SHW200; VHW200
Tyre Size	: 11R22.5 149/146L
Market	: EU
Pitch number	: 75
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 26.5%
Width: main grooves [mm]	: 13.0
Depth: center groove [mm]	: 14.5
Depth: shoulder groove [mm]	: 14.5
Tyre mass [kg]	48.5
Tread depth [mm]	14.5
Tread width [mm]	214
Curvature radius of tread crown [mm]	700
Tyre outer diameter[mm]	1050
Tread plies	1 STEEL + 3 STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

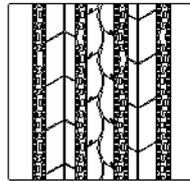
Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



LOWER MOLD



UPPER MOLD

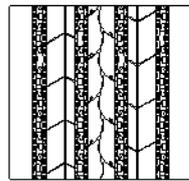
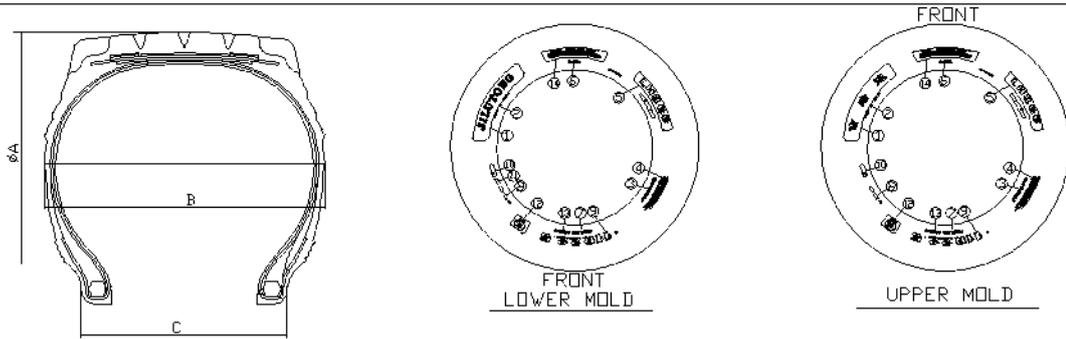


LH398 , SFC77 , FM919
KT919 , SHW200 , VHW200

14	PLIES SIDEWALL 1 STEEL TREAD 4 STEEL MAX LOAD SINGLE 3750kg (8270 LBS) AT 930 kpa (135 PSI) COLD MAX LOAD DUAL 3450kg (7600 LBS) AT 930 kpa (135 PSI) COLD
13	STANDARD RIM 9.00
12	CCC
11	DATE CODE XXXX
10	E9 XXXXXX
9	315/70R22.5 L54/151L
8	DOT XXXXXXXX
7	TUBE LESS
6	ALL STEEL RADIAL
5	TREAD DESCRIPTION
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/70R22.5 20PR	JILUTONG , SAFECESS , FIREMAX KPATOS , SUNWIDE , AVENTUS	LH398 , SFC77 , FM919 KT919 , SHW200 , VHW200	154/151	L	T/L	1014	312	229.0	14.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



SHW200, VHW200

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 3250kg (7160 LBS) AT 930 kpa (135 PSI) COLD MAX LOAD DUAL 3100 kg (6610 LBS) AT 930 kpa (135 PSI) COLD
13	STANDARD RIM 8.25
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	11R22.5 149/146L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

11R22.5 18PR	SUNWIDE , AVENTUS	SHW200, VHW200	149/146	L	T/L	1050	279	209.6	14.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						



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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1145*04**

Nº de extensión / *Extension No.*: **04**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23071167

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : Si / Yes |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : LH688 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; XCENT; AVENTUS
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 75 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 75 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.01 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5:1.01 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5.64 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 5.64 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CN17110405; CN18070375; CN19070754; CN21090767; **CN23071167**
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 28/11/2017; 19/07/2018; 29/07/2019; 28/09/2021; **21/08/2023**
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23071167 / *See Test Report Number CN23071167*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23071167****REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN IV
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION IV**

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: Sí / Yes
Designación de tipo de neumático / Tyre type designation	: LH688
Marca / Brand name	: JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; XCENT; AVENTUS
Nombre comercial / Commercial name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; EL969; VDR530
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 21/08/2023

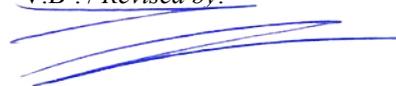
CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.B° / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



INFORME/REPORT Nº CN23071167

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/70R22.5 154/151L (mayor ancho de sección, relación de aspecto más baja / *widest section width, lowest aspect ratio*).
Ver Anexo 1, Informe CN23070659, IDIADA, 17/08/2023
See Annex 1, Test report CN23070659, IDIADA, 17/08/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 295/80R22.5 152/149L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN16120066, IDIADA, 08/11/2016
See Annex 2, Test report CN16120066, IDIADA, 08/11/2016
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 295/80R22.5 152/149L (cumple el nuevo valor límite calculado / *meets new calculated limit value*)
Ver Anexo 3, Informe CN16110065, IDIADA, 27/10/2016
See Annex 3, Test report CN16110065, IDIADA, 27/10/2016
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extensión (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas marcas / *Addition of new brand names*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
 - Exclusión de marcas / *Deletion of brand names*
 - Exclusión de nombres comerciales / *Deletion of trade descriptions*
 - Actualización del número de suplemento reglamentario / *Upgrade of the regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 21/08/2023



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*
 * EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANNEX 1

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CN23071167





REPORT No. CN23070659

UN REGULATION No. 117R02/14 RELATED TO ROLLING SOUND EMISSIONS

Applicant : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China

Manufacturer : WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD.
Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)

Tyre class : C3

Category of use : Normal

Tyre for use in severe snow conditions : No

Traction tyre : Yes

Brand name / Trade mark : FIREMAX

Trade description/ Commercial name : FM08

Tyre size : 315/70R22.5 154/151L

Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 17/08/2023

CONCLUSIONS: The samples of the family have been tested according to the technical prescriptions with regard to "rolling sound emissions level" pursuant to UN Regulation No. 117R02/14. The characteristics of the tested samples are detailed in the annex to the test report.

Performed by:

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



ANNEX TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23070659

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Normal
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: Yes
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM08
1.1.9	Tyre size	: 315/70R22.5 154/151L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 154 / 3,750
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 2723, 2TWLJLA31
1.1.13	Reference inflation pressure P _r [kPa]	: 930

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2694

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CN23070659



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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$633.41 \leq 640.00 \leq 696.75$
Front axle right wheel	$599.72 \leq 600.00 \leq 659.69$
Rear axle left wheel	$639.73 \leq 640.00 \leq 703.71$
Rear axle right wheel	$651.84 \leq 660.00 \leq 717.02$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2308/02276-01	CN-2308/02276-02

Rear left	Rear right
CN-2308/02276-03	CN-2308/02276-04

1.1.16 Test rim : 9.00 x 22.5

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02745-01	CN-1912/02745-02

Rear left	Rear right
CN-1912/02745-03	CN-1912/02745-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	2,758	$50 < 73.55 < 90$
Front axle right wheel	2,640	$50 < 70.40 < 90$
Rear axle left wheel	2,780	$50 < 74.13 < 90$
Rear axle right wheel	2,822	$50 < 75.25 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 73.33 \leq 80$

FULFILS / NOT FULFILS

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IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)

**1.2. Test vehicle**

1.2.1	Trade name	: HYUNDAI
1.2.2	Model	: XCIENT
1.2.3	Year	: 2019
1.2.4	Transmission	: Manual
1.2.5	Wheelbase [mm]	: 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

1.2.6	Vehicle internal reference	: CN-2001/01800
-------	----------------------------	-----------------

1.3. Test equipment

1.3.1	Sound level meter 1	: 193663
1.3.2	Sound level meter 2	: 193664
1.3.3	Manometer	: 193661
1.3.4	Weight scale	: 184618
1.3.5	Track temperature measurement device	: 182330
1.3.6	Wind speed measurement device	: 193666
1.3.7	Speed measurement device	: 035816
1.3.8	Ambient temperature measurement device	: 193659



2. TEST TRACK

2.1. Environment

2.1.1	Air temperature T_a [°C] $5.0 < T_a < 40.0$: 30.4	FULFILS / NOT FULFILS
2.1.2.	Test surface temperature T_s [°C] $5.0 \leq T_s \leq 50.0$: 37.0	FULFILS / NOT FULFILS
2.1.3	Wind speed [m/s] Less than 5 m/s	: 3.9	FULFILS / NOT FULFILS
2.1.4	Ambient noise [dB(A)] Test result – Ambient noise ≥ 10 dB(A)	: 35.5	FULFILS / NOT FULFILS
2.1.5	Wind direction [°]	: 125.0	

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 6th 2023
- Issued by : IDIADA



3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	62.2	S → N	75.3	76.3	30.2	34.8	75.3	76.3
2	64.9	S → N	76.2	77.0	30.2	34.9	76.2	77.0
3	66.9	N → S	76.6	76.9	30.3	36.8	76.6	76.9
4	68.3	S → N	76.6	77.2	30.4	36.6	76.6	77.2
5	71.8	N → S	76.8	77.4	30.4	37.4	76.8	77.4
6	74.3	S → N	76.8	77.6	30.3	37.8	76.8	77.6
7	75.6	N → S	77.2	77.8	30.4	38.2	77.2	77.8
8	77.8	N → S	77.4	78.3	30.6	39.4	77.4	78.3

- 3.1. Regression line slope : 17.37
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 76.95
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77

THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. (TS) LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE2594

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CN23070467

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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 16/08/2023

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

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ANNEX 2

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CN23071167

IDIADA

**REPORT N° CN16120066**

UN/ECE REGULATION 117R02 RELATED TO ADHESION ON WET SURFACES

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECCESS

Commercial description : SFC08

Category of use : Normal

Tyre class : C3

Tyre size : 295/80R22.5 152/149L

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 08/11/2016

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “adhesion performance on wet surfaces” pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested samples are detailed in the annex to the test report.
Test configuration as per ISO 15222: *Configuration 1 (4 candidate tyres in test vehicle)*

Performed by:

Frank Yu
TEST ENGINEER

Revised by:

Lluís Sans Gomis
DEPARTMENT MANAGER



**ANNEX TO THE TEST REPORT
ADHESION ON WET SURFACES**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFECCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3,550
- 1.1.10 Reference pressure [kPa] : 900
- 1.1.11 Test tyre internal reference :

Front left	Front right
CN16120066-1	CN16120066-2

Rear left	Rear right
CN16120066-3	CN16120066-4

- 1.1.12 Test rim : 9.00 x 22.5
- 1.1.13 Test rim internal reference :

Front left	Front right
G-B227	G-B225

Rear left	Rear right
G-B226	G-B228

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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



1.1.14 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 SRTT internal reference :

Front left	Front right
BW-FG-031	BW-FG-032

Rear left	Rear right
BW-FG-030	BW-FG-033

1.1.16 Test SRTT rim : 9.00 x 22.5

1.1.17 Test SRTT rim internal reference :

Front left	Front right
G-B229	G-B230

Rear left	Rear right
G-B231	G-B232

1.1.18 Test tyre load [kg] :

SRTT1			Candidate			SRTT2		
FL	2,994	79.8% Qr	FL	2,988	84.2% Qr	FL	3,002	80.1% Qr
FR	2,824	75.3% Qr	FR	2,858	80.5% Qr	FR	2,840	75.7% Qr
RL	2,818	75.1% Qr	RL	2,828	79.7% Qr	RL	2,818	75.1% Qr
RR	2,876	76.7% Qr	RR	2,878	81.1% Qr	RR	2,878	76.7% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

FULFILS / NOT FULFILS

1.2. Test vehicle

1.2.1 Trade name : SITRAK

1.2.2 Model : C7H400

1.2.3 Year : 2015

1.2.4 Transmission : Manual

1.2.5 Wheelbase [mm] : 3,600

1.2.6 Vehicle internal reference : SB-G-110

1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

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1.3. Test inflation pressure

1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	679	631	630	646
SRTT 2	682	636	630	646

1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	2,988	3,550	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	2	726
FR	2,858	3,550		2	686
RL	2,828	3,550	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	2	677
RR	2,878	3,550		2	692

1.4. Test equipment

- 1.4.1 Manometer : PCL DAC1C08C
- 1.4.2 Weight scale : SB-G-070
- 1.4.3 Thermometer : G-B029
- 1.4.4 Track temperature measurement device : G-B030
- 1.4.5 Speed measurement device : SB-G-109
- 1.4.6 Force pedal : SB-G-11



2. TEST TRACK

2.1. Location : ABS Surface, CATARC Yancheng

2.2. Date of check on compliance of the test surface: July 3rd 2015

2.3. Test track characteristics:

2.3.1 Sand depth [mm] : 0.98

2.3.2 BPN : 58.0

2.3.3 Water depth [mm] : Between 0.50 and 1.50

2.4. Test method : Vehicle

2.5. Air temperature T_a [°C] : 19.7

2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT1	Candidate	SRTT2
19.5	18.8	18.4

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS

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CN162290961167

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3. TEST RESULTS

Test run	SRTT 1		Candidate		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	23.02	5.36	22.70	5.44	22.57	5.47
2	23.02	5.36	23.10	5.34	22.87	5.40
3	22.55	5.47	22.54	5.48	22.44	5.50
4	-	-	21.72	5.68	-	-
5	-	-	22.39	5.51	-	-
6	-	-	22.80	5.41	-	-

Coefficient of variation

SRTT 1	Candidate Tyre	SRTT 2
1.20	2.11	0.97
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	N - S	315/70R22.5	---	5.40 m/s ²	---	> 600
3	60 - 20	N - S	---	295/80R22.5	5.48 m/s ²	1.01	> 600
4	60 - 20	N - S	315/70R22.5	---	5.46 m/s ²	---	> 600

Wet grip index G = 1.01

Wet grip index (Worst case) ≥ 0.80

Wet grip index (Any size) ≥ 0.88

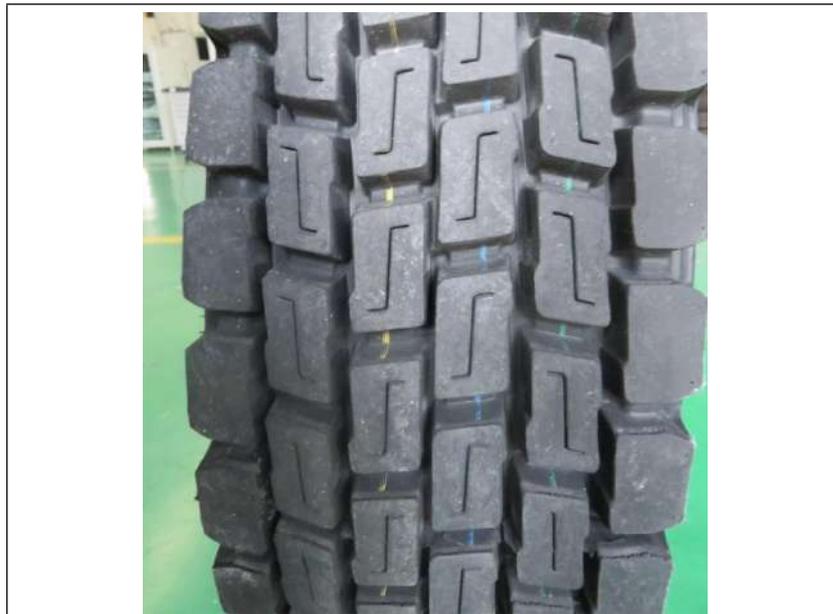
FULFILS / NOT FULFILS



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Yancheng, China

Date of test: 08/11/2016

Frank Yu
TEST ENGINEER



ANNEX 3

Validate this report with the security code «3OX4Y3NM» at: <https://extranet.idiada.com/hom-cve>

CN23071167

IDIADA

**REPORT N° CN16110065**

UN/ECE REGULATION 117R02 RELATED TO ROLLING RESISTANCE

Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jianggan District
310030 HANGZHOU, Zhejiang (CHINA)

Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China

Trade name : SAFECESS

Commercial description : SFC08

Tyre Class : C3

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 27/10/2016

CONCLUSIONS: The tested sample of the family FULFILS the technical prescriptions with regard to “rolling resistance” pursuant to UN/ECE REGULATION 117R02.
The characteristics of the tested sample are detailed in the annex to the test report.

Performed by:

Revised by:

Frank Yu
TEST ENGINEERLluís Sans Gomis
DEPARTMENT MANAGER

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
* THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



**ANNEX TO THE TEST REPORT
UN/ECE REGULATION 117R02**

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : HANGZHOU GENERAL STANDARD CO., LTD.
Building 228, Jianding Road, Jiangnan District
310030 HANGZHOU, Zhejiang (CHINA)
- 1.1.2 Manufacturer : Weifang Shunfuchang Rubber & Plastic Co., Ltd.
Government Station, Hualong Town, Shouguang City,
262700, Shandong Province, China
- 1.1.3 Trade name : SAFCESS
- 1.1.4 Commercial description : SFC08
- 1.1.5 Category of use : Normal
- 1.1.6 Tyre Class : C3
- 1.1.7 Tyre size : 295/80R22.5 152/149L
- 1.1.8 Tyre structure : Radial
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 152 / 3550
- 1.1.10 Inflation pressure [kPa] : 900
- 1.1.11 Test tyre internal reference : 16-499
- 1.1.12 Test rim : 9.00 x 22.5"
- 1.1.13 Test rim internal reference : CTQI-01
- 1.1.14 Test rim material : Steel

1.2. Test machine data

- 1.2.1 Identification : B1037
- 1.2.2 Drum diameter [mm] : 1707.6
- 1.2.3 Surface : Smooth steel
- 1.2.4 Roughness [μm] : ≤ 6.3

FULFILS/NOT FULFILS

FULFILS/NOT FULFILS

Validate this report with the security code « 3OX4Y3NM » at: <https://extranet.idiada.com/hom-cve>


 CN162190951167



1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121)

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 152 / 3550

1.3.4 Test load [kg / N] : 3,017.5 / 29,591.6

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

FULFILS/NOT FULFILS

1.3.5 Test inflation pressure, initial [kPa] : 900

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

FULFILS/NOT FULFILS

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.498

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.528

1.3.8 Ambient temperature T_{am} [°C] : 23.44

$20.0 \leq T_{am} \leq 30.0$

FULFILS/NOT FULFILS

1.3.9 Skim test load [N] : 397.51

$C3 \leq 500$ N

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 117.71

1.3.11 Spindle force during skim test (Ft) [N] : 7.86

1.3.12 Parasitic loss (Fpl) [N] : 12.72

1.3.13 Rolling resistance (Fr) [N] : 173.69

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



2. TEST RESULTS

- 2.1. Rolling resistance coefficient
- 2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.87
- 2.1.2 Temperature corrected value [N/kN] : 5.81
- 2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.64

Rolling resistance coefficient C_r [N/kN] = 5.64

2.2. Limit value for the Class C3 tyre (Stage 2): 6.5 N/kN

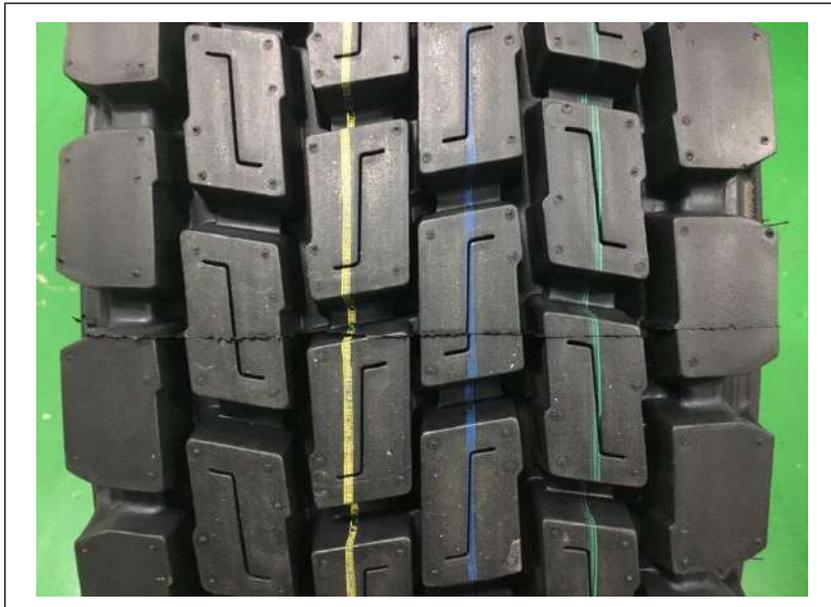
FULFILS / NOT FULFILS



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Beijing, China

Date of test: 19/10/2016

Frank Yu
TEST ENGINEER

TECHNICAL DOCUMENTATION

Type of tyre:

LH688



Date : Aug 19, 2023

Ext. : 04

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT; AVENTUS**
 - 1.5. Trade description(s)/Commercial name(s) : LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969; VDR530**
 - 1.6. Type of tyre : LH688
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to Attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
 - 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

to in paragraph 4.

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; SAFECESS; FIREMAX; KPATOS; TRANSKING; FIRELION; ODYKING; RUNTEK; CROWN; HUNTERROAD; ECOSTAR; SUNWIDE; **XCENT**; **AVENTUS**

Trade description(s)/Commercial name(s):

LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; **EL969**; **VDR530**

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound Db(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/Kn of Stage II	Limit for Snow grip index
1	E9-00.1005	11R22.5 146/143L	N.A.	75	0.65	6.5	N.A.
2	E9-00.6171	11R22.5 149/146L	N.A.	75	0.65	6.5	N.A.
3	<u>E9-00.1102</u>	<u>11R22.5 146/143M</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
4	E9-00.1006	12R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
5	E9-00.1008	295/80R22.5 152/149L	N.A.	75	0.65	6.5	N.A.
6	E9-00.1009	315/80R22.5 154/151L	N.A.	75	0.65	6.5	N.A.
7	E9-00.1067	315/80R22.5 156/153L	N.A.	75	0.65	6.5	N.A.
8	<u>E9-00.6588</u>	<u>315/70R22.5 154/151L</u>	<u>N.A.</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>	<u>N.A.</u>
9							
10							
11							
12							
13							
14							
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16							
17							
18							
19							
20							

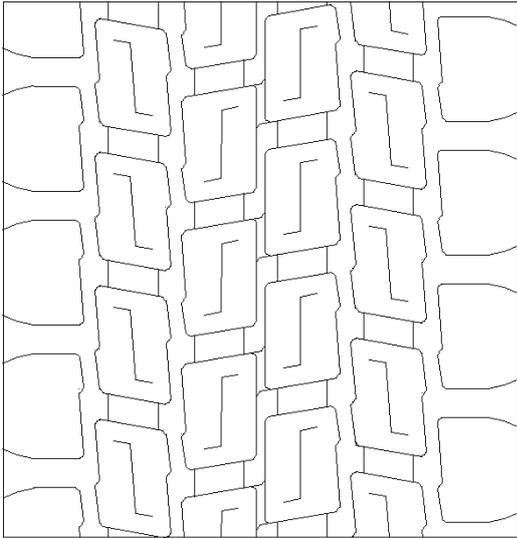
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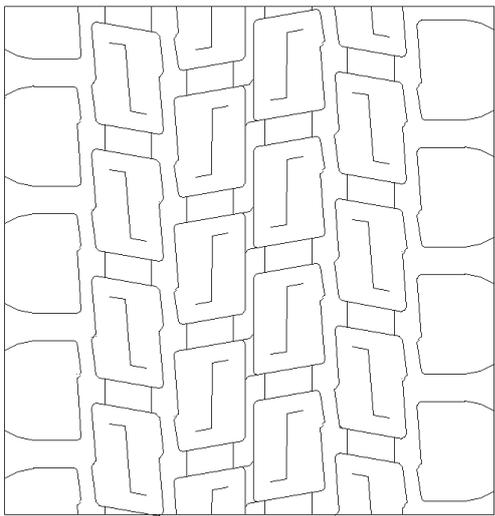
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Worst Case Selection

Test size for rolling sound	:	315/70R22.5 154/151L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	295/80R22.5 152/149L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.715 < 1.01$ (Wet grip test result)
Test size for rolling resistance	:	295/80R22.5 152/149L
Because of	:	Lowest load index; or Calculated limit value = $(RRC\text{-limit value } R117 - 0.3\#N/kN) - 0.06^* \times (LI\text{-candidate} - LI\text{-lowest})$ The new limit value is $5.84 > 5.64$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

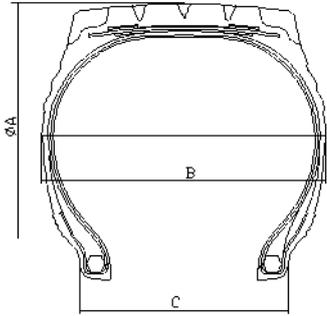
Attachment-2 Details of the major features

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 315/70R22.5 154/151L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 6.5
Depth: center groove [mm]	: 19.0
Depth: shoulder groove [mm]	: 19.0
Tyre mass [kg]	53.5
Tread depth [mm]	19.0
Tread width [mm]	248
Curvature radius of tread crown [mm]	965
Tyre outer diameter[mm]	1014
Tread plies	4STEEL
Tyre tread pattern	 <p style="text-align: center;">49 BLOCKS</p>

Drawings of the sidewall (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH688; SFC08; FM08; KTR67; TG108; FL08; OD626; AK97; CL688; H801; ECO08; SDR530; VDR530; EL969
Tyre Size	: 295/80R22.5 152/149L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.0000
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 4.0
Depth: center groove [mm]	: 18.0
Depth: shoulder groove [mm]	: 18.0
Tyre mass [kg]	53.0
Tread depth [mm]	18.0
Tread width [mm]	224
Curvature radius of tread crown [mm]	697
Tyre outer diameter[mm]	1044
Tread plies	1STEEL+3STEEL
Tyre tread pattern	 <p>51 BLOCKS</p>

Attachment 3 Drawings or photographs of the tyre sidewall

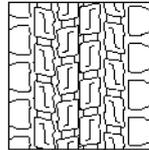
Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



LOWER MOLD



UPPER MOLD



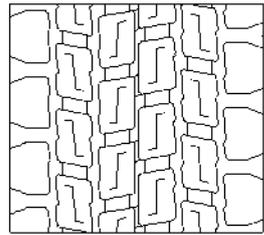
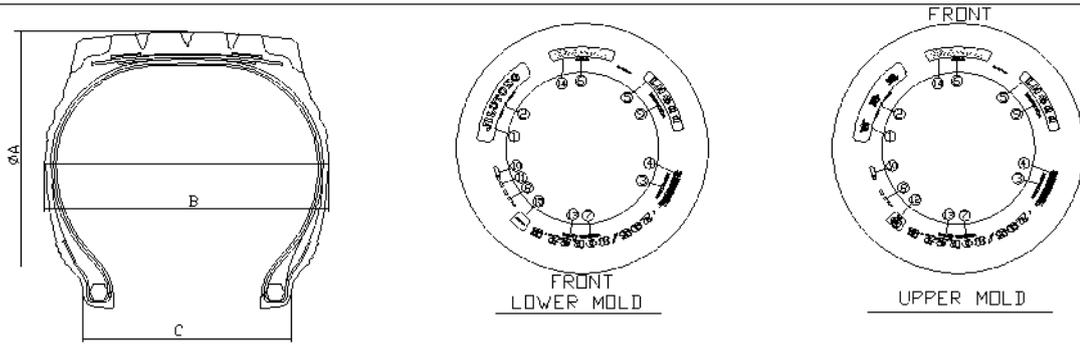
49 BLOCKS

LH688 , SFC08 , FM08
KTR67 , SDR530 , ECD08
H801 , VDR530 , EL969

15	TRACTION
14	PLIES SIDEWALL 1 STEEL TREAD 4 STEEL
14	MAX LOAD SINGLE 3750kg (8270 LBS) AT 930 kpa (135 PSI) COLD
14	MAX LOAD DUAL 3450kg (7610 LBS) AT 930 kpa (135 PSI) COLD
13	STANDARD RIM 9.00
12	CCC
11	DATE CODE XXXX
10	Ⓜ XXXXXX
9	315/70R22.5 154/151L
8	DOT XXXXXXXX
7	TUBE LESS
6	ALL STEEL RADIAL
5	TREAD DESCRIPTION
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/70R22.5 20PR	JILUTONG , SAFECESS , FIREMAX KPATOS , SUNWIDE , ECOSTAR HUNTERROAD , AVENTUS , XCENT	LH688 , SFC08 , FM08 KTR67 , SDR530 , ECD08 H801 , VDR530 , EL969	154/151	L	T/L	1014	312	228.6	19.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



51 BLOCKS

LH688, SFC08, FM08, KTR67
TG108, FL08, DD626, AK97
H801, ECC08, SDR530

15	TRACTION
14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 3520kg (7950 LBS) AT 300 kpa (4.30 PSI) COLD MAX LOAD DUPL 3220kg (7100 LBS) AT 300 kpa (4.30 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	Ⓔ XXXXXX
9	295/80R22.5 152/149L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

295/80R22.5 18PR	JILUTONG, SAFECESS, FIREMAX KPATOS, TRANSKING, FIRELION DDYKING, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH688, SFC08, FM08 KTR67, TG108, FL08 DD626, AK97, H801 ECC08, SDR530	152/149	L	T/L	1044	298	228.6	22
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



(1)

E9*117R02/14*1092*06

Página / Page 1 / 3

Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1092*06**

Nº de extensión / *Extension No.*: **06**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23020659

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special</i> ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH668 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





(1)

E9*117R02/14*1092*06

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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING;
TRANSKING; SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN;
HUNTERROAD; ECOSTAR
- 6.2. Denominación(es) comercial(es) / Trade
description(s)/commercial name(s) of the type of tyre : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101;
CL101; H701; ECO18; SMX300
7. Servicio técnico autorizado a efectos de homologación o
comprobación de los ensayos de conformidad/
Technical service approved for purposes of approval or of
verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de
resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ /
Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage
1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo
en el Apéndice 1 del Anexo 3: 73 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the
representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to
Annex 3: 73 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este
Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,20 (G) mediante el método
de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this
Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.20 (G) using the vehicle or trailer ⁽²⁾
method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento,
de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 6,19 N/kN / Rolling resistance level
of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix
1 to Annex 6: 6.19 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num.
117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en
nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow
performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the
test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction
method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





(1)

E9*117R02/14*1092*06

Página / Page 3 / 3

- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CV15100481; CV16100663; CN17050370; CV18070697; CV18080073; CN19070753; CN21090766; CN23020659
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 02/11/2015; 20/10/2016; 26/05/2017; 24/07/2018; 02/08/2018; 29/07/2019; 28/09/2021; 15/02/2023
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23020659 / *See Test Report Number CN23020659*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020659**

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN VI
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION VI

Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Clase del neumático / Tyre Class : C3
Categoría de uso / Category of use : Normal / Normal

Neumático de tracción / Traction tyre : No / No

Designación de tipo de neumático /
Tyre type designation : LH668

Marca / Brand name : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; HUNTERROAD;
ECOSTAR

Nombre comercial / Commercial name : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101; CL101;
H701; ECO18; SMX300

Lugar y fecha de emisión del informe /
Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.B° / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020659

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 13R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15070679, IDIADA, 10/08/2015
See Annex 1, Test report CV15070679, IDIADA, 10/08/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 9.00R20 144/142L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15100879, IDIADA, 08/08/2015
See Annex 2, Test report CV15100879, IDIADA, 08/08/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 7.00R16LT 118/114L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CV15090243, IDIADA, 22/09/2015
See Annex 3, Test report CV15090243, IDIADA, 22/09/2015
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2022



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15070679 / ROLLING SOUND EMISSIONS CV15070679

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG118
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 13R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	565,22 ≤ 590,00 ≤ 621,74
Rueda derecha del eje delantero / Front axle right wheel	567,42 ≤ 590,00 ≤ 624,16
Rueda izquierda del eje trasero / Rear axle left wheel	623,57 ≤ 650,00 ≤ 685,93
Rueda derecha del eje trasero / Rear axle right wheel	632,57 ≤ 660,00 ≤ 695,83

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
 THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1507/511	HVI-1507/512

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1507/513	HVI-1507/514

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1205/675	HVI-1205/676

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/677	HVI-1205/678

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2.886	50 < 72,15 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2.895	50 < 72,38 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.122	50 < 78,05 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.158	50 < 78,95 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 75,38 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

- 1.2.6 Referencia interna del vehículo /
Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 140070
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto /
Track temperature measurement device : 141537
- 1.3.6 Anemómetro /
Wind speed measurement device : 150095
- 1.3.7 Velocímetro /
Speed measurement device : 109547
- 1.3.8 Termómetro de la temperatura ambiente /
Ambient temperature measurement device : 10004

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.



2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 30,9
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2 Temperatura de la superficie de ensayo [°C]: 48,6
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 1,9
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 42,1
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Presión barométrica [kPa] / : 100,19
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 58,15
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 176,0
Wind direction [°]

2.2. Fecha de ensayo y método de verificación según ISO 10844:2011 /

Date and method of check on compliance of the test surface with ISO 10844:2011:

- 25 de mayo de 2015 / *May 25th 2015*
 - Emitido por / *Issued by* : IDIADA

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,5	W → E	72,5	72,9	30,4	48,5	72,5	72,9
2	64,7	W → E	73,8	73,8	30,7	48,5	73,8	73,8
3	66,6	W → E	73,6	74,0	31,5	48,5	73,6	74,0
4	68,8	W → E	74,6	74,5	31,0	48,6	74,6	74,5
5	72,6	W → E	75,1	75,3	30,8	48,6	75,1	75,3
6	74,5	W → E	75,4	75,5	30,9	48,6	75,4	75,5
7	76,8	W → E	76,5	76,4	30,8	48,7	76,5	76,4
8	78,4	W → E	77,2	76,7	30,8	48,6	77,2	76,7

- 3.1. Pendiente de la recta de regresión / : 39,15
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 74,8
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 73
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4. Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) / : 73
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

Lugar de ensayo / Place of test: L'Albornar (Santa Oliva)

Fecha de ensayo / Date of test: 10/08/2015



Zhu Yuan
 HOMOLOGATION ENGINEER



ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15100879 / ADHESION ON WET SURFACES CV15100879

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : PANJI
- 1.1.4 Denominación comercial / Commercial description : PJ668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 9.00R20 144/142L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 144 / 2.800
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1507/515	HVI-1507/516

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1507/517	HVI-1507/518

- 1.1.12 Llanta de ensayo / Test rim : 7.50 x 20
- 1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1306/39	HVI-1306/40

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1306/42	HVI-1306/41

1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1304/137	HVI-1304/138

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1304/139	HVI-1304/140

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7.50 x 19.5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/279	HVI-1206/278

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/276	HVI-1206/277

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT 1			Candidate			SRTT 2		
FL	2.210	98,7% Q _r	FL	2.245	80,2% Q _r	FL	2.208	98,6% Q _r
FR	2.204	98,4% Q _r	FR	2.243	80,1% Q _r	FR	2.203	98,3% Q _r
RL	2.192	97,9% Q _r	RL	2.239	80,0% Q _r	RL	2.190	97,8% Q _r
RR	2.190	97,8% Q _r	RR	2.236	79,9% Q _r	RR	2.191	97,8% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT FULFILS

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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Model	: PREMIUM
1.2.3	Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: HVI-1301/641
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	747	745	740	739
SRTT 2	746	744	739	739

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
FL	2.245	2.800	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	2	683
FR	2.243	2.800		2	682
RL	2.239	2.800	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	2	681
RR	2.236	2.800		2	679

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140071
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 06268-1
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 150129, 150129-1
- 1.4.5 Dispositivo para medir la velocidad / *Speed measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / *Location* : Pista ABS / *ABS Surface*, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / *Date of check on compliance of the test surface* : 7 de enero de 2015 / *January 7th 2015*
- 2.3. Características de la pista de ensayo / *Test track characteristics*
 - 2.3.1 Profundidad grano de arena / *Sand depth* [mm] : 0,97
 - 2.3.2 BPN : 56
 - 2.3.3 Profundidad del agua / *Water depth* [mm] : Entre 0,75 a 1,00 / *Between 0.75 and 1.00*
- 2.4. Método de ensayo / *Test method* : Vehículo / *Vehicle*
- 2.5. Temperatura del aire T_a [°C] / *Air temperature T_a [°C]* : 31,1
- 2.6. Temperatura de la pista de ensayo T_w [°C] / *Wet surface temperature T_w [°C]* :
 $5,0 \leq T_w \leq 35,0$

SRTT 1	Candidato / <i>Candidate</i>	SRTT 2
28,0	29,2	32,5

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	29,87	4,13	24,84	4,97	29,19	4,23
2	29,32	4,21	24,12	5,12	29,83	4,14
3	29,09	4,24	24,92	4,95	29,73	4,15
4	-	-	24,25	5,09	-	-
5	-	-	24,17	5,11	-	-
6	-	-	24,83	4,97	-	-

Coefficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
1,36	1,54	1,17
< 3%	< 3%	< 3%

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet grip index	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19.5	---	4,20 m/s ²	---	> 600
3	60 - 20	W - E	---	9.00R20	5,04 m/s ²	1,20	> 600
4	60 - 20	W - E	245/70R19.5	---	4,17 m/s ²	---	> 600

Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

$$G(T) = 1,20$$

Índice de adherencia en mojado (para el peor caso)

$$Wet\ grip\ index\ (Worst\ case) \geq 0,80$$

Índice de adherencia en mojado (cualquier medida)

$$Wet\ grip\ index\ (Any\ size) \geq 0,88$$

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 08/08/2015



Zhu Yuan
HOMOLOGATION ENGINEER

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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15090243 / ROLLING RESISTANCE CV15090243

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : YUWANG
- 1.1.4 Denominación comercial / Commercial description : YW668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 7.00R16LT 118/114L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 118 / 1.320
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 770
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1509/404
- 1.1.12 Llanta de ensayo / Test rim : 6,00 x 16
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1305/133
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

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1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / Identification : AMB-1000RRH

1.2.2 Diámetro de tambor / Drum diameter [mm] : 1.700

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / Surface : Acero liso / Smooth steel

1.2.4 Rugosidad / Roughness [μm] : $\leq 6,3$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / Measurement method : Par / Torque

1.3.2 Velocidad de ensayo / Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga (LI) / Carga [kg] : 118 / 1.320
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / Test load [kg / N] : 1.122 / 11.006,8

C2/C3 (% de carga simple): 85 (*)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.5 Presión de ensayo [kPa] / : 770
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

CUMPLE / NO-CUMPLE

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FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,01

$$20,0 \leq T_{am} \leq 30,0$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4

$$C3 \leq 500 \text{ N}$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (Tt) [Nm] / *Input load torque* (Tt) [Nm] : 98,83

1.3.10 Par en skim test (Tpl) [Nm] / *Input skim test torque* (Tpl) [Nm] : 39,58

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**2. RESULTADOS DE ENSAYO / TEST RESULTS**

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 6,34
- 2.1.2 Valor corregido por temperatura / : 6,34
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 6,19
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 6,19

- 2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 22/09/2015

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Zhu Yuan
HOMOLOGATION ENGINEER

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TECHNICAL DOCUMENTATION

Type of tyre:

LH668



Date : Feb 10. 2023

Ext. : 06

REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE ACCORDING TO REGULATION 117.02

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR
 - 1.5. Trade description(s)/Commercial name(s) : LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300
 - 1.6. Type of tyre : LH668
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3
- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR

Trade description(s)/Commercial name(s):

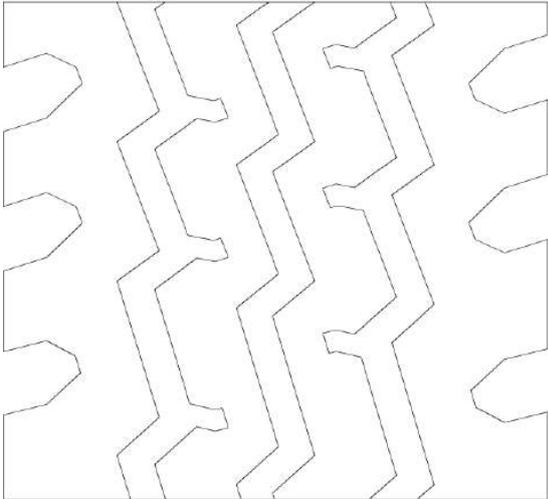
LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1072	7.00R16LT 118/114L	N.A.	73	0.80	6.5	N.A.
2	E9-00.1071	7.50R16LT 122/118L	N.A.	73	0.80	6.5	N.A.
3	E9-00.1070	8.25R16LT 128/124L	N.A.	73	0.80	6.5	N.A.
4	E9-00.1069	8.25R20 139/137L	N.A.	73	0.80	6.5	N.A.
5	E9-00.1000	9.00R20 144/142L	N.A.	73	0.80	6.5	N.A.
6	E9-00.1001	10.00R20 149/146K	N.A.	73	0.80	6.5	N.A.
7	E9-00.1002	11.00R20 152/149K	N.A.	73	0.80	6.5	N.A.
8	E9-00.1003	12.00R20 154/151K	N.A.	73	0.80	6.5	N.A.
9	E9-00.1068	12.00R20 156/153K	N.A.	73	0.80	6.5	N.A.
10	<u>E9-00.6533</u>	<u>12.00R20 156/153K</u>	<u>N.A.</u>	<u>73</u>	<u>0.80</u>	<u>6.5</u>	<u>N.A.</u>
11	E9-00.1004	12.00R24 160/157K	N.A.	73	0.80	6.5	N.A.
12	E9-00.1005	11R22.5 146/143L	N.A.	73	0.80	6.5	N.A.
13	E9-00.1102	11R22.5 146/143M	N.A.	73	0.80	6.5	N.A.
14	E9-00.6171	11R22.5 149/146L	N.A.	73	0.80	6.5	N.A.
15	E9-00.1006	12R22.5 152/149L	N.A.	73	0.80	6.5	N.A.
16	E9-00.1251	13R22.5 154/151L	N.A.	73	0.80	6.5	N.A.
17	E9-00.1204	13R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
18	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
19							
20							

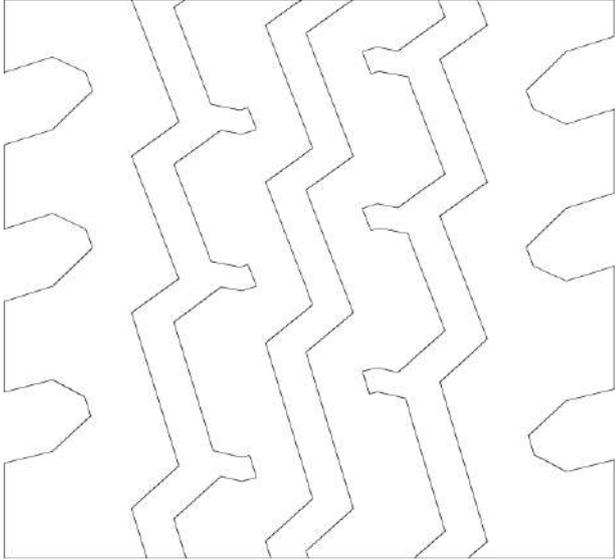
Worst Case Selection

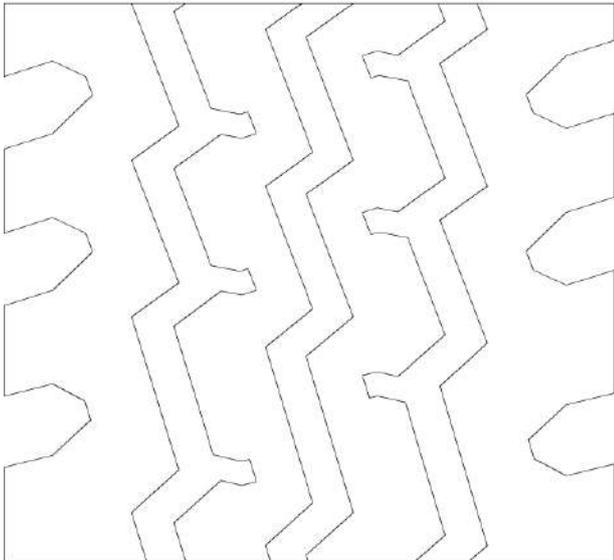
Test size for rolling sound	:	13R22.5 156/153L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	9.00R20 144/142L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.20$ (Wet grip test result)
Test size for rolling resistance	:	7.00R16LT 118/114L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 13R22.5 156/153L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.2441
Groove area ratio [%]	: 31.5 %
Width: main grooves [mm]	: 14
Depth: center groove [mm]	: 14.3
Depth: shoulder groove [mm]	: 15.3
Tyre tread pattern	

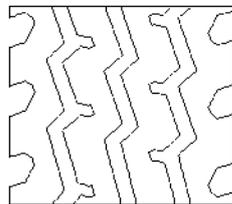
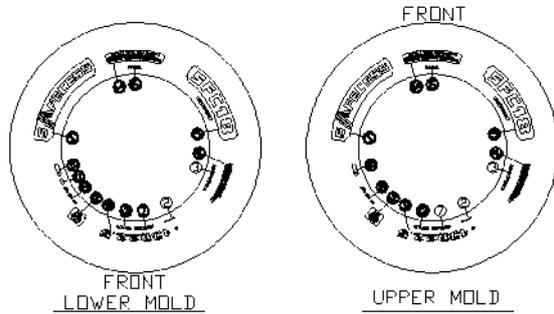
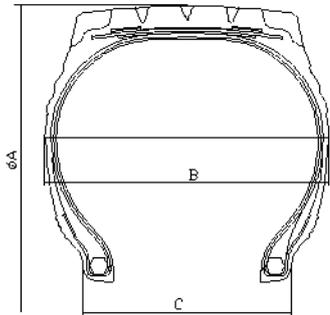
Drawing of the tread pattern
(for measured tyre using for tyre wet grip performance)

Manufacturer name	:	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	:	LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	:	9.00R20 144/142L
Market	:	EU
Pitch number	:	53
Pitch ratio (Max/Min)	:	1.2489
Groove area ratio [%]	:	31.5 %
Width: main grooves [mm]	:	11.3
Depth: center groove [mm]	:	14.5
Depth: shoulder groove [mm]	:	15.5
Tyre tread pattern		

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 7.00R16LT 118/114L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.2146
Groove area ratio [%]	: 32 %
Width: main grooves [mm]	: 9.0
Depth: center groove [mm]	: 11.0
Depth: shoulder groove [mm]	: 12.0
Tyre mass [kg]	21.5
Tread depth [mm]	11.0
Tread width [mm]	145
Curvature radius of tread crown [mm]	436
Tyre outer diameter[mm]	769
Tread plies	4 PLYES STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise performance)

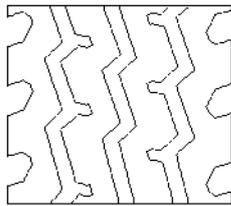
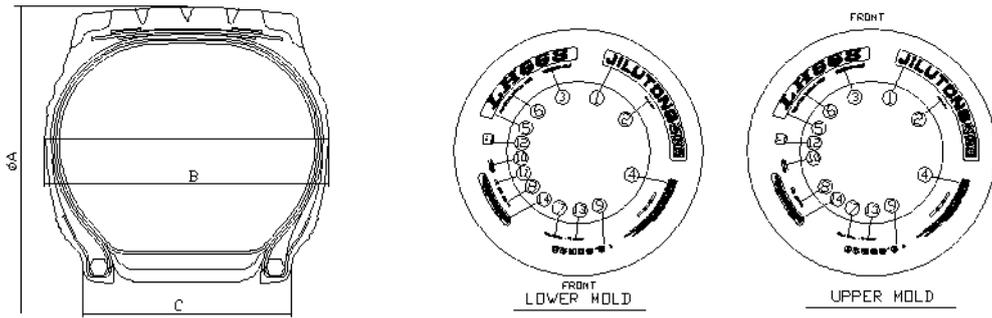


LH668, RW300, DD901, TG118
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECD18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8800 LBS) AT 350 kpa (123 PSI) COLD MAX LOAD DUAL 3600kg (7900 LBS) AT 350 kpa (123 PSI) COLD
13	STANDARD RIM 9.75
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	13R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

13R22.5 20PR	JILUTONG, RICHWAY, DDIYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KFAOTOS CROWN, CROWN, HUNTERROAD ECDSTAR	LH668, RW300, DD901 TG118, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECD18, SMX300	156/153	L	T/L	1124	320	260	15.3
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall (for measured tyre using for tyre wet grip performance)

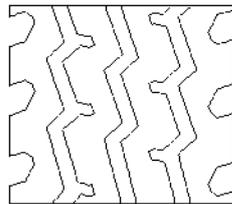
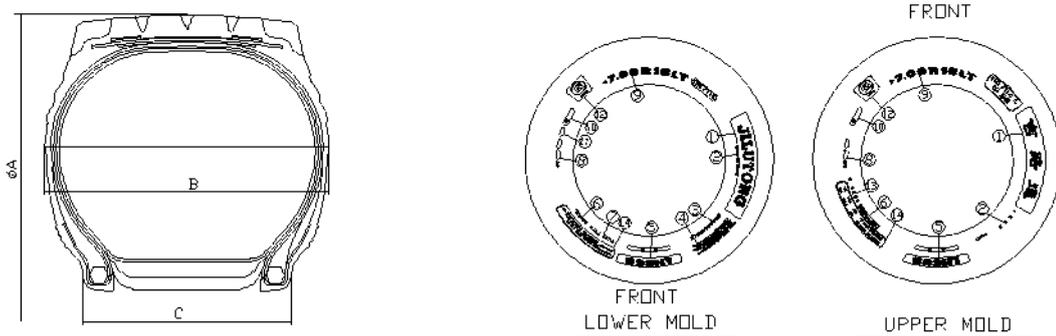


LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	RJES- SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 2300kg (5075 LBS) AT 300 kpa (130 PSI) COLD MAX LOAD DUAL 2690kg (5940 LBS) AT 300 kpa (130 PSI) COLD
13	STANDARD RIM 7.0
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	9.00R20 144/142L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

9.00R20 16PR	JILUTONG, RICHWAY, DBYKING TRANSKING, SAFECESS, SUNFULCESS FJRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	144/142	L	T/T	1018	258	190	15.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			

Drawings of the sidewall
(for measured tyre using for tyre rolling resistance performance)



LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 1320kg (2910 LBS) AT 770 kpa (110 PSI) COLD MAX LOAD DUAL 1180kg (2600 LBS) AT 770 kpa (110 PSI) COLD
13	STANDARD RIM 5.50F
12	3CF000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	7.00R16LT 118/114L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

7.00R16LT 14PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	118/114	L	T/T	778	202	150	12.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / Approval No ⁽³⁾: **E9*117R02/14*1388*02**

Nº de extensión / Extension No.: **02**

Sufijos / Suffixes ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / Reason for extension: Ver informe N° / See test report No. : CN23020662

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
<i>normal / snow / special ⁽²⁾</i> |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH309 |
| 6.1. | Marca(s) / <i>Brand name(s)/Trademark(s)</i> | : JILUTONG; SAFECESS; FIREMAX; KPATOS;
HUNTERROAD; ODYKING |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH309; SFC39; FM19; KDM19; H802; OD302 FM19+; KDM19+
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 73 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 73 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,07 (G) mediante el método de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.07 (G) using the vehicle or trailer ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5,14 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 5.14 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾
- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method. ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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9. Número de informe emitido por el Servicio Técnico / : CN22100080; CN22110605; CN23020662
Number of report issued by the Technical Service
10. Fecha del informe emitido por este Servicio / : 13/10/2022; 18/11/2022; 15/02/2023
Date of report issued by that service
11. Motivo(s) de la extensión (en su caso) / : Ver informe de ensayo número CN23020662 / *See*
Reason(s) of extension (if applicable) *Test Report Number CN23020662*
12. Observaciones / : N/A
Any remarks
13. Lugar / : Madrid
Place
14. Fecha/ : Ver firma electrónica /
Date *See electronic signature*
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación /*Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





INFORME/REPORT N° CN23020662

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN II
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION II

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: No / No
Designación de tipo de neumático / Tyre type designation	: LH309
Marca / Brand name	: JILUTONG; SAFECESS; FIREMAX; KPATOS; HUNTERROAD; ODYKING
Nombre comercial / Commercial name	: LH309; SFC39; FM19; KDM19; H802; OD302 <u>FM19+</u> ; <u>KDM19+</u>
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:



Zhu Yuan
HOMOLOGATION ENGINEER

V.B° / Revised by:



Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020662

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica
: *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/80R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CN22090275, IDIADA, 06/09/2022
See Annex 1, Test report CN22090275, IDIADA, 06/09/2022
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 315/80R22.5 156/153L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN22090312, IDIADA, 13/09/2022
See Annex 2, Test report CN22090312, IDIADA, 13/09/2022
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 315/80R22.5 156/153L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CN22090758, IDIADA, 20/09/2022
See Annex 3, Test report CN22090758, IDIADA, 20/09/2022
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2023



Zhu Yuan
HOMOLOGATION ENGINEER

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ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CN22090275/ ROLLING SOUND EMISSIONS CN22090275

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.3 Marca / Trade name : FIREMAX
- 1.1.4 Denominación comercial / Commercial description : FM19
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre class : C3
- 1.1.7 Medida del neumático / Tyre size : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4,000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t[kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	544,24 ≤ 550,00 ≤ 598,67
Rueda derecha del eje delantero / Front axle right wheel	550,08 ≤ 560,00 ≤ 605,09
Rueda izquierda del eje trasero / Rear axle left wheel	545,21 ≤ 550,00 ≤ 599,73
Rueda derecha del eje trasero / Rear axle right wheel	561,79 ≤ 570,00 ≤ 617,97

$P_t \geq 150$ kPa

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
CN-2208/06387-01	CN-2208/06387-02
Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
CN-2208/06387-03	CN-2208/06387-04

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
CN-1912/02745-01	CN-1912/02745-02
Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
CN-1912/02745-03	CN-1912/02745-04

1.1.15 Carga neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2,800	50 < 70,00 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2,824	50 < 70,60 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	2,804	50 < 70,10 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	2,872	50 < 71,80 < 90

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 ≤ 70,63 ≤ 80

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : HYUNDAI
- 1.2.2 Modelo / Model : XCIENT
- 1.2.3 Año / Year : 2019
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3,560

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

- 1.2.6 Referencia interna del vehículo : CN-2001/01800
Vehicle internal reference

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 193663
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 193664
- 1.3.3 Manómetro / Manometer : 27230
- 1.3.4 Báscula / Weight scale : SCS-5 / SCS-10
- 1.3.5 Termómetro de la temperatura del asfalto / : 182330
Track temperature measurement device
- 1.3.6 Anemómetro / : 193666
Wind speed measurement device
- 1.3.7 Velocímetro / : 170358
Speed measurement device
- 1.3.8 Termómetro de la temperatura ambiente / : 193659
Ambient temperature measurement device

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 26,4
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2. Temperatura de la superficie de ensayo [°C] / : 38,6
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 2,3
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 43,2
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A)
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Dirección de viento [°] / : 123,0
Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:2014 /
 Date and method of check on compliance of the test surface with ISO 10844:2014:**

- Report number : FM /002 / 21
- Date of check : March 8th 2021
- Issued by : IDIADA

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,8	N → S	72,9	72,9	26,4	38,7	72,9	72,9
2	64,6	S → N	73,2	73,4	26,3	38,5	73,2	73,4
3	66,3	N → S	74,4	73,5	26,3	38,7	74,4	73,5
4	68,1	S → N	74,1	74,4	26,5	38,6	74,1	74,4
5	72,9	N → S	76,0	76,7	26,3	38,4	76,0	76,7
6	74,5	S → N	75,9	75,9	26,5	38,7	75,9	75,9
7	76,0	N → S	76,5	76,6	26,4	38,5	76,5	76,6
8	78,4	S → N	76,5	77,2	26,6	38,6	76,5	77,2

- 3.1. Pendiente de la recta de regresión / : 43,62
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 74,9
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 73
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4. Valor límite / Limit value :

Categoría de uso / Category of use	C3		
	Fase 1 / Stage 1	Fase 2 / Stage 2	
		Otro / Other	Tracción / Traction
Normal / Normal	76	73	75
Nieve / Snow	78	73	75
Nieve en condiciones severas / Snow (for use in severe Snow conditions)		74	76
Especial / Special	79	75	77

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4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: ICPG, Zhaoyuan, China

Fecha de ensayo / Date of test: 06/09/2022

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

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 MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CN22090312 / ADHESION ON WET SURFACES CN22090312

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.3 Marca / Trade name : FIREMAX
- 1.1.4 Denominación comercial / Commercial description : FM19
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre class : C3
- 1.1.7 Medida del neumático / Tyre size : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4,000
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 850
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
CN-2208/06387-01	CN-2208/06387-02
Trasera izquierda / Rear left	Trasera derecha / Rear right
CN-2208/06387-03	CN-2208/06387-04

- 1.1.12 Llanta de ensayo / Test rim : 9,00 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
CN-1912/02745-01	CN-1912/02745-02
Trasera izquierda / Rear left	Trasera derecha / Rear right
CN-1912/02745-03	CN-1912/02745-04

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1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
CN-2204/01872-01	CN-2204/01872-02

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
CN-2204/01872-03	CN-2204/01872-04

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 9,00 x 22,5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
CN-1912/02743-01	CN-1912/02743-02

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
CN-1912/02743-03	CN-1912/02743-04

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load [kg]* :

SRTT1			Candidato / <i>Candidate</i>			SRTT2		
DI / <i>FL</i>	2,774	74.0% Qr	DI / <i>FL</i>	2,772	69.3% Qr	DI / <i>FL</i>	2,772	73.9% Qr
DD / <i>FR</i>	2,684	71.6% Qr	DD / <i>FR</i>	2,672	66.8% Qr	DD / <i>FR</i>	2,676	71.4% Qr
TI / <i>RL</i>	2,766	73.8% Qr	TI / <i>RL</i>	2,756	68.9% Qr	TI / <i>RL</i>	2,766	73.8% Qr
TD / <i>RR</i>	2,884	76.9% Qr	TD / <i>RR</i>	2,884	72.1% Qr	TD / <i>RR</i>	2,874	76.6% Qr

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / ~~NO CUMPLE~~
 FULFILS / ~~NOT FULFILS~~

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : HYUNDAI
- 1.2.2 Modelo / Model : XCIENT
- 1.2.3 Año / Year : 2019
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3,560
- 1.2.6 Referencia interna del vehículo / Vehicle internal reference : CN-2001/01800
- 1.2.7 Configuración del vehículo (ISO 15222) / Vehicle configuration (ISO 15222) : Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / Configuration 1 (4 candidate tyres in test vehicle)

1.3. Presión de inflado de la prueba / Test inflation pressure

- 1.4.1 Presión de inflado de SRTT y neumático de control / SRTT and control tyre inflation pressure [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	630	630	630	648
SRTT 2	630	630	630	645

Control / Control	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
DI / FL	2,772	4,000	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	1	595
DD / FR	2,672	4,000		1	595
TI / RL	2,756	4,000	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	1	595
TD / RR	2,884	4,000		1	595

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / Manometer : 27230
- 1.4.2 Báscula / Weight scale : SCS-5/ SCS-10
- 1.4.3 Termómetro / Thermometer : 182330

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- 1.4.4 Dispositivo para medir la temperatura de pista : 182329
Track temperature measurement device
- 1.4.5 Dispositivo para medir la velocidad/ : VBOX Sport 07013178
Speed measurement device

2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / *Location* : Straight line braking B, ICPG
- 2.2. Fecha de verificación de la pista de ensayo / : April 1st 2022
Date of check on compliance of the test surface:
- 2.3. Características de la pista de ensayo /
Test track characteristics
 - 2.3.1 Profundidad grano de arena / *Sand depth* [mm] : 0,86
 - 2.3.2 BPN : 52,40
 - 2.3.3 Profundidad del agua / *Water depth* [mm] : Promedio de 1,18 / *Average of 1,18*
- 2.4. Método de ensayo / *Test method* : Vehículo / *Vehicle*
- 2.5. Temperatura del aire T_a [°C] / : 23,4
Air temperature T_a [°C]
- 2.6. Temperatura de la pista de ensayo T_w [°C] :
Wet surface temperature T_w [°C]

$$5,0 \leq T_w \leq 35,0$$

SRTT1	Candidato / <i>Candidate</i>	SRTT2
20,6	20,6	21,2

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Variación durante el ensayo inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Candidato / Candidate		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	29,72	4,15	27,17	4,54	29,18	4,23
2	28,92	4,27	27,28	4,53	28,91	4,27
3	29,01	4,26	27,35	4,51	29,12	4,24
4	-	-	27,14	4,55	-	-
5	-	-	27,29	4,52	-	-
6	-	-	27,84	4,43	-	-

Coefficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
1,49	0,92	0,49
< 3 per cent	< 3 per cent	< 3 per cent

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (m/s ²)	Índice de adherencia en mojado / Wet Grip Index	Fuerza pedal / Pedal force [N]
1	60 - 20	S - N	315/70R22.5	---	4,23 m/s ²	---	> 600
4	60 - 20	S - N	---	315/80R22.5	4,52 m/s ²	1,07	> 600
5	60 - 20	S - N	315/70R22.5	---	4,25 m/s ²	---	> 600

Wet grip index G = 1,07

3.1. Valor límite / Limit value:

Categoría de uso / Category of use	Índice de adherencia en mojado / Wet Grip Index (+10% Wet Grip Index) (G)			
	C2		C3	
	Otro / Other	Tracción / Traction	Otro / Other	Tracción / Traction
Normal / Normal	≥ 0,95 (≥ 1,05)	≥ 0,85 (≥ 0,94)	≥ 0,80 (≥ 0,88)	≥ 0,65 (≥ 0,72)
Nieve / Snow			≥ 0,65 (≥ 0,72)	
Nieve en condiciones severas / Snow (for use in severe Snow conditions)	≥ 0,85 (≥ 0,94)	≥ 0,85 (≥ 0,94)	≥ 0,65 (≥ 0,72)	≥ 0,65 (≥ 0,72)
Especial / Special			≥ 0,65 (≥ 0,72)	

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4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: ICPG, Zhaoyuan, China

Fecha de ensayo / Date of test: 13/09/2022

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Zhu Yuan
HOMOLOGATION ENGINEER

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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA / ROLLING RESISTANCE CN22090758

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / *Applicant* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.2 Fabricante / *Manufacturer* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA).
- 1.1.3 Marca / *Trade Name* : FIREMAX
- 1.1.4 Denominación comercial / *Commercial description* : FM19
- 1.1.5 Categoría de uso / *Category of use* : Normal / *Normal*
- 1.1.6 Clase del neumático / *Tyre Class* : C3
- 1.1.7 Medida del neumático / *Tyre size* : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / *Tyre structure* : Radial / *Radial*
- 1.1.9 Índice de carga/Masa correspondiente / *Load index / Corresponding mass Q_r [kg]* : 156 / 4,000
- 1.1.10 Presión de inflado / *Inflation pressure [kPa]* : 850
- 1.1.11 Referencia interna de neumático de ensayo / *Test tyre internal reference* : CN22090758
- 1.1.12 Llanta de ensayo / *Test rim* : 9,0 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo / *Test rim internal reference* : RIM 9,0 x 22,5
- 1.1.14 Material de la llanta de ensayo / *Test rim material* : Steel

1.2. Datos de la máquina de ensayo / Test machine data:

- 1.2.1 Identificación / *Identification* : JD-029

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1.2.2 Diámetro de tambor / *Drum diameter* [mm] : 2,000

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / *Surface* : Acero pulido / *Smooth steel*

1.2.4 Rugosidad / *Roughness* [μm] : $\leq 6,3$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / *Test data*

1.3.1 Método de medida / *Measurement method* : Fuerza / *Force*

1.3.2 Velocidad de ensayo / *Test speed* [km/h] : 80

C1: 80 km/h (todos los índices de velocidad y de carga);

C1: 80 km/h (all speed and load symbols)

C2/C3: 80km/h (todos los símbolos de velocidad e índices de carga < o igual a 121);

C2/C3: 80 km/h (all speed symbol and load symbol < equal to 121)

C3: 60 km/h (J:100 km/h and lower or tyres not market with speed symbol and load symbol > to 121);

C3: 60 km/h (J:100 km/h y menor o neumáticos no marcados con símbolos de velocidad e índices de carga > a 121)

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);

C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga /
Masa correspondiente Q_i [kg] : 156 / 4,000
Load index /
Corresponding mass Q_i [kg]

1.3.4 Carga de ensayo / *Test load* [kg / N] : 3,400 / 33,340

C1 (% del máximo índice de carga) : 80

C1 (% of maximum load capacity)

C2/C3 (% de carga simple) : 85 (*)

C2/C3 (% of single load)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

() as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre*

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.3.5 Presión de inflado en el ensayo / : 850
Test inflation pressure, initial [kPa]

C1: 210 kPa si es estándar / 250 kPa si es reforzado

C1: 210 kPa if standard/ 250 kPa if reinforced

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application ()*

(*): *inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.*

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático
 a la superficie exterior del tambor
 bajo condiciones de estado estacionario
 durante ensayo(r_L) / : 0,51
*Distance from the tyre axis to the
 drum outer surface under
 steady state conditions during test(r_L)*

1.3.7 Distancia del eje del neumático
 a la superficie exterior del tambor
 bajo condiciones de estado estacionario
 durante parásitas (r_L) / : 0,54
*Distance from the tyre axis to the
 drum outer surface under
 steady state conditions during skim test(r_L)*

1.3.8 Temperatura ambiente / : 24,91
Ambient temperature T_{am} [°C]

$20,0 \leq T_{am} \leq 30,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

1.3.9 Carga en el ensayo de parásitas / : 399,7
Skim test load [N]

$C1 \leq 200 \text{ N}$

$C2 \leq 200 \text{ N}$ si es medurado en máquina C1 o $C2 \leq 500 \text{ N}$ si es medurado en máquina C3

$C2 \leq 200 \text{ N}$ if measured in C1 machine or $C2 \leq 500 \text{ N}$ if measured in C3 machine

$C3 \leq 500 \text{ N}$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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- 1.3.10 Fuerza en el eje / *Spindle force (Ft)* [N] : 124,55
- 1.3.11 Fuerza en el eje durante parásitas / *Spindle force during skim test (Fpl)* [N] : 10,66
- 1.3.12 Pérdida de parásitas / *Parasitic loss (Fpl)* [N] : 16,41
- 1.3.13 Fuerza de resistencia a rodadura / *Rolling resistance forcé (Fr)* [N] : 171,22

2. RESULTADOS DE ENSAYO / TEST RESULTS

- 2.1. Coeficiente de resistencia a la rodadura / *Rolling resistance coefficient*
 - 2.1.1 Valor inicial / *Initial value* [N/kN] : 5,14
 - 2.1.2 Valor corregido por temperatura / *Temperature corrected value* [N/kN] : 5,13
 - 2.1.3 Valor corregido por diámetro de tambor y temperatura / *Temperature and drum diameter corrected value* [N/kN] : 5,14

Coeficiente de resistencia a la rodadura / *Rolling resistance coefficient* Cr [N/kN] = 5,14

- 2.2. Valor límite / *Limit value* [N/kN] :

	Fase 1 / <i>Stage 1</i>	Fase 2 / <i>Stage 2</i>
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

Para “neumáticos de nieve en condiciones severas”, los límites deben incrementarse en 1 N/kN. / *For "snow tyre for use in severe snow conditions", the limits shall be increased by 1 N/kN.*

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3. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: QTC (Qingdao, China)

Fecha de ensayo / Date of test: 20/09/2022

Validate this report with the security code «9CE2VCUZ» at: <https://extranet.idiada.com/hom-cve>

CN23020662

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

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TECHNICAL DOCUMENTATION

Type of tyre:

LH309



Date : Feb 02. 2023

Ext. : 02

REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE ACCORDING TO REGULATION 117.02

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; HUNTERROAD; ODYKING;
 - 1.5. Trade description(s)/Commercial name(s) : LH309; SFC39; FM19; KDM19; H802; OD302 FM19+; KDM19+
 - 1.6. Type of tyre : LH309
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
 - 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; SAFECESS; FIREMAX; KPATOS; HUNTERROAD; ODYKING;

Trade description(s)/Commercial name(s):

LH309; SFC39; FM19; KDM19; H802; OD302; FM19+; KDM19+

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
2	<u>E9-00.6541</u>	<u>315/80R22.5 157/154M</u>	<u>N.A.</u>	<u>73</u>	<u>0.80</u>	<u>6.5</u>	N.A.
3							
4							
5							
6							
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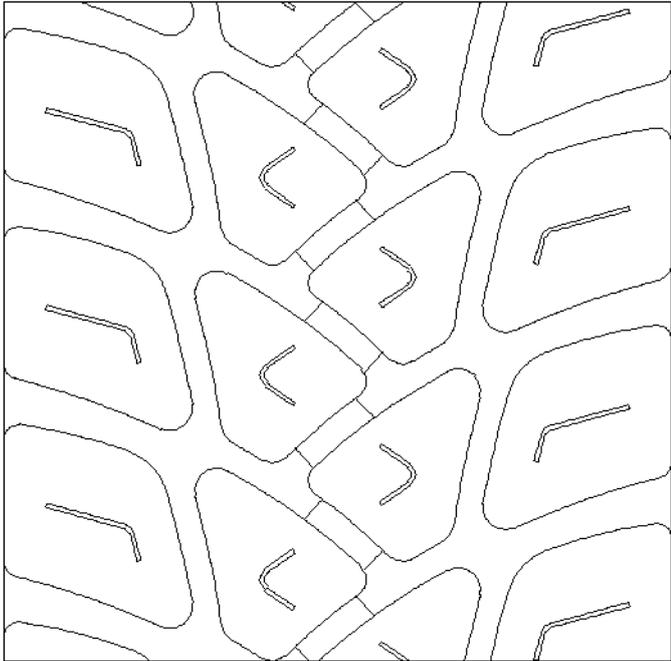
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Worst Case Selection

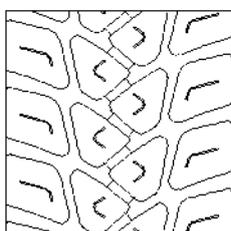
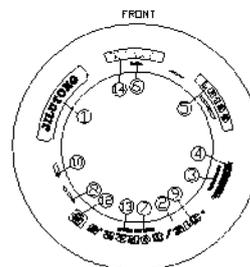
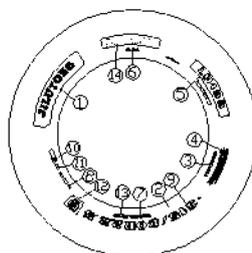
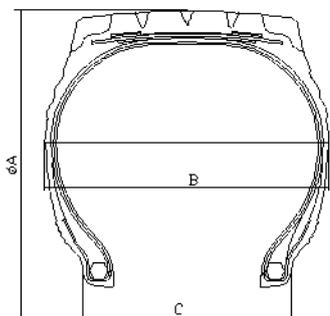
Test size for rolling sound	:	315/80R22.5 156/153L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	315/80R22.5 156/153L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.07$ (Wet grip test result)
Test size for rolling resistance	:	315/80R22.5 156/153L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH309; SFC39; FM19; KDM19; H802; OD302; <u>FM19+</u> ; <u>KDM19+</u>
Tyre Size	: 315/80R22.5 156/153L
Market	: EU
Pitch number	: 48
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 28.5 %
Width: main grooves [mm]	: 10.5
Depth: center groove [mm]	: 9.0
Depth: shoulder groove [mm]	: 17.5
Tyre mass [kg]	57.0
Tread depth [mm]	17.5
Tread width [mm]	236
Curvature radius of tread crown [mm]	700
Tyre outer diameter[mm]	1076
Tread plies	4 PLYS STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



LH309 ,SFC39 , FM19
KDM19 , H802 , DD302
FM19+ , KDM19+

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8820 LBS) AT 850 kpa (123 PSD) COLD MAX LOAD DUAL 3650kg (8050 LBS) AT 850 kpa (123 PSD) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	(E) xxxxxx
9	315/80R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

315/80R22.5 20PR	JILUTONG, SAFECESS, FIREMAX KPATOS, HUNTERROAD, ODYKING	LH309, SFC39, FM19 KDM19, H802, DD302 FM19+, KDM19+	156/153	L	T/L	1076	312	229.0	17.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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E9*117R02/12*1090*04

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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/12*1090*04**

Nº de extensión / *Extension No.*: **04**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

- | | | |
|------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang City, Shandong
Province (CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas / <i>Snow
tyre for use in severe snow conditions</i> | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : radial / <i>radial</i> |
| 6. | Designación de tipo de neumático / <i>Tyre type designation</i> | : LH399 |
| 6.1. | Marca(s) / <i>Brand name(s)/Trademark(s)</i> | : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; RUNTEK;
HUNTERROAD; ECOSTAR |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.2. Denominación(es) comercial(es)/ Trade description(s)/Commercial name(s) of the type of tyre : LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 72 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 72 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,24 (G) mediante el método de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.24 (G) using the vehicle or trailer ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6 4,66 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6 4.66 N/kN
- 8.4. Nivel de adherencia sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7 N/A (Índice de adherencia en nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow grip level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (Snow grip index) using the brake on snow method, spin traction method or acceleration method ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / Number of report issued by the Technical Service : CV15090442; CV16100662; CV18070698; CV18080074; CN19070752; CN21090765
10. Fecha del informe emitido por este Servicio / Date of report issued by that service : 30/09/2015; 20/10/2016; 26/07/2018; 02/08/2018; 29/07/2019; 28/09/2021

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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11. Motivo(s) de la extensión (en su caso) /
Reason(s) of extension (if applicable) : Ver informe de ensayo número CN21090765 / *See Test Report Number CN21090765*
12. Observaciones /
Any remarks : N/A
13. Lugar /
Place : Madrid
14. Fecha/
Date : Ver firma electrónica /
See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación /*Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾*
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/Commercial name the list of tyre size designations and Service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos C1 y C2, Apéndice 3 para neumáticos C3. / *Appendix 2 for C1 and C2 tyres, Appendix 3 for C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*



**INFORME/REPORT N° CN21090765**

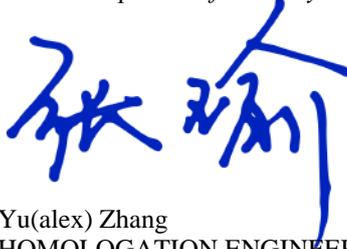
REGLAMENTO CEPE/ONU 117R02/12 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN IV
UN/ECE REGULATION 117R02/12 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION IV

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Normal / Normal
Neumático de tracción / Traction tyre	: No / No
Marca / Brand name	: JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR
Nombre comercial / Commercial name	: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Designación de tipo de neumático / Tyre type designation	: LH399
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 28/09/2021

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO CEPE/ONU 117R02/12 Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to UN/ECE REGULATION 117R02/12 The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Yu(alex) Zhang
HOMOLOGATION ENGINEER

V.B°. / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



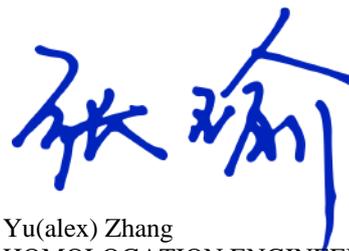
INFORME/REPORT N° CN21090765

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 315/80R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15050967, IDIADA, 05/06/2015
See Annex 1, Test report CV15050967, IDIADA, 05/06/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 11R22.5 146/143L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15050971, IDIADA, 10/06/2015
See Annex 2, Test report CV15050971, IDIADA, 10/06/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 11R22.5 146/143L (menor índice de carga / *lowest load index*)
Ver Anexo 3, Informe CV15050978, IDIADA, 04/06/2015
See Annex 3, Test report CV15050978, IDIADA, 04/06/2015
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Inclusión de nuevos nombres comerciales / *Addition of new trade descriptions*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 28/09/2021



Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15050967/ ROLLING SOUND EMISSIONS CV15050967

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 315/80R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_i [kPa] / Test inflation pressure P_i [kPa] :

	P_i [kPa] valor admisible / P_i [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	629,57 ≤ 690,00 ≤ 692,52
Rueda derecha del eje delantero / Front axle right wheel	627,82 ≤ 685,00 ≤ 690,60
Rueda izquierda del eje trasero / Rear axle left wheel	611,86 ≤ 670,00 ≤ 673,04
Rueda derecha del eje trasero / Rear axle right wheel	616,09 ≤ 675,00 ≤ 677,70

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CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1505/666	HVI-1505/667

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1505/668	HVI-1505/669

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1203/17	HVI-1205/1601

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/1599	HVI-1205/681

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	3.146	50 < 78,65 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	3.139	50 < 78,48 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.075	50 < 76,88 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.092	50 < 77,30 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 77,83 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

- 1.2.6 Referencia interna del vehículo / Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 10246
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto / Track temperature measurement device : 141537
- 1.3.6 Anemómetro / Wind speed measurement device : 150095
- 1.3.7 Velocímetro / Speed measurement device : 130204
- 1.3.8 Termómetro de la temperatura ambiente / Ambient temperature measurement device : 10004

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 33,3
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.2. Temperatura de la superficie de ensayo [°C]: 43,5
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.3 Velocidad del viento [m/s] / : 2,5
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.4 Ruido ambiente [dB(A)] / : 45,8
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

2.1.5 Presión barométrica [kPa] / : 100,79
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 21,84
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 233,3
Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:1994 /
 Date and method of check on compliance of the test surface with ISO 10844:1994:**

- 25 de mayo de 2015 / *May 25th 2015*

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- Emitido por / *Issued by* : IDIADA
3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,4	W → E	72,5	72,0	33,1	42,7	72,5	72,0
2	64,3	W → E	72,5	72,6	33,0	43,1	72,5	72,6
3	66,7	W → E	73,2	72,9	33,6	43,2	73,2	72,9
4	68,8	W → E	73,0	72,9	33,6	43,1	73,0	72,9
5	72,9	W → E	74,6	73,9	33,1	42,9	74,6	73,9
6	74,6	W → E	74,6	73,9	32,8	44,6	74,6	73,9
7	76,5	W → E	74,9	74,2	33,9	44,1	74,9	74,2
8	78,3	W → E	75,0	74,1	33,3	43,9	75,0	74,1

- 3.1. Pendiente de la recta de regresión / : 25,50
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 73,5
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 72
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4. Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) / : 73 dB(A)
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)
 Fecha de ensayo / *Date of test*: 05/06/2015



Yu (alex) Zhang
 HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15050971 / ADHESION ON WET SURFACES CV15050971

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 11R22.5 146/143L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 146 / 3.000
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 825
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI- 1505/662	HVI-1505/663

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1505/664	HVI-1505/665

- 1.1.12 Llanta de ensayo / Test rim : 8,25 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1203/131	HVI-1205/690

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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1205/701	HVI-1205/700

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1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT /
SRTT internal reference :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1204/01	HVI-1204/02
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1204/03	HVI-1204/04

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7,50 x 19,5

1.1.17 Referencia interna de la llanta del SRTT /
Test SRTT rim internal reference :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/249	HVI-1206/252
Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/250	HVI-1206/251

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT 1			Candidate			SRTT 2		
DI / FL	2,073	92,5% Q _r	DI / FL	2,110	70,3% Q _r	DI / FL	2,070	92,4% Q _r
DD / FR	2,005	89,5% Q _r	DD / FR	2,051	68,4% Q _r	DD / FR	2,009	89,7% Q _r
TI / RL	1,849	82,5% Q _r	TI / RL	1,895	63,2% Q _r	TI / RL	1,852	82,7% Q _r
TD / RR	1,866	83,3% Q _r	TD / RR	1,900	63,3% Q _r	TD / RR	1,870	83,5% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Modelo / Model	: PREMIUM
1.2.3	Año / Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: HVI-1205/352
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	690	662	598	605
SRTT 2	689	663	599	606

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
DI / FL	2.110	3.000	1- Si / If Q _t < 75% Q _r entonces / then: P_t = (0.7) x P_r	1	578
DD / FR	2.051	3.000		1	578
TI / RL	1.895	3.000	2- Si / If Q _t ≥ 75% Q _r entonces / then: P_t = P_r x (Q_t / Q_r)^{1.25}	1	578
TD / RR	1.900	3.000		1	578

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140070
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 130665
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 06349
- 1.4.5 Dispositivo para medir la velocidad / *Temperature measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / *Location* : Pista ABS / *ABS Surface*, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / *Date of check on compliance of the test surface* : 19 de Abril de 2014 / April 19th 2014
- 2.3. Características de la pista de ensayo / *Test track characteristics*
 - 2.3.1 Profundidad grano de arena / *Sand depth* [mm] : 0,85
 - 2.3.2 BPN : 55
 - 2.3.3 Profundidad del agua / *Water depth* [mm] : Entre 0,75 a 1,00 / *Between 0.75 and 1.00*
- 2.4. Método de ensayo / *Test method* : Vehículo / *Vehicle*
- 2.5. Temperatura del aire T_a [°C] / *Air temperature T_a [°C]* : 28,0
- 2.6. Temperatura de la pista de ensayo T_w [°C] / *Wet surface temperature T_w [°C]* :
 $5,0 \leq T_w \leq 35,0$

SRTT 1	Candidato / <i>Candidate</i>	SRTT 2
21,8	23,6	29,4

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	26,50	4,66	21,52	5,74	29,98	4,12
2	26,54	4,65	22,45	5,50	28,65	4,31
3	26,51	4,66	22,31	5,53	29,24	4,22
4	-	-	21,32	5,79	-	-
5	-	-	22,65	5,45	-	-
6	-	-	22,32	5,53	-	-

Coeficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
0,08	2,48	2,27
< 3%	< 3%	< 3%

~~CUMPLE / NO CUMPLE~~
FULFILS / NOT FULFILS

Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	BFC(R)	BFC(T)	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19,5	---	4,66 m/s ²	---	---	> 600
2	60 - 20	W - E	---	11R22,5	5,59 m/s ²	0,46	0,57	> 600
4	60 - 20	W - E	245/70R19,5	---	4,22 m/s ²	---	---	> 600

Cálculo del índice de adherencia en mojado del neumático candidato / Calculation of the wet grip index of the candidate tyre:

$$G(T) = \left[\frac{BFC(T)}{BFC(R)} \times 125 + a \times (t - t_0) + b \times \left(\frac{BFC(R)}{BFC(R_0)} - 1,0 \right) \right] \times 10^{-2}$$

Donde / where:

a = -0,4232

b = -8,297

 t₀ = 20°C

 BFC(R₀) = 0,68

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Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

G (T) = 1,24

Índice de adherencia en mojado (para el peor caso)

Wet grip index (Worst case) $\geq 0,80$

Índice de adherencia en mojado (cualquier medida)

Wet grip index (Any size) $\geq 0,88$

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 10/06/2015

Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15050978 / ROLLING RESISTANCE CV15050978

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANKING
- 1.1.4 Denominación comercial / Commercial description : TG866
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 11R22.5 146/143L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 146 / 3.000
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 830
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1505/661
- 1.1.12 Llanta de ensayo / Test rim : 8,25 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1201/163
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

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1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / *Identification* : AMB-1000RRH

1.2.2 Diámetro de tambor / *Drum diameter* [mm] : 1.700

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.2.3 Superficie / *Surface* : Acero liso / *Smooth steel*

1.2.4 Rugosidad / *Roughness* [µm] : ≤ 6,3

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / *Measurement method* : Par / *Torque*

1.3.2 Velocidad de ensayo / *Test speed* [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3.3 Índice de carga (LI) / Carga [kg] : 146 / 3.000
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / *Test load* [kg / N] : 2.550 / 25.015,5

C2/C3 (% of single load): 85 (*)
(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

1.3.5 Presión de ensayo [kPa] / : 830
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple
(*) : presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.
C2/C3: corresponding to maximum load capacity for single application (*)
(*) : inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

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CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,00
 $20,0 \leq T_{am} \leq 30,0$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4
 $C3 \leq 500$ N

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (T_t) [Nm] / *Input load torque* (T_t) [Nm] : 135,52

1.3.10 Par en skim test (T_{pl}) [Nm] / *Input skim test torque* (T_{pl}) [Nm] : 33,53

Validate this report with the security code « UJ09VVHJ » at: <https://extranet.idiada.com/hom-cve>

CN21090765



* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

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2. RESULTADOS DE ENSAYO / TEST RESULTS

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 4,79
- 2.1.2 Valor corregido por temperatura / : 4,80
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 4,66
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 4,66

2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 04/06/2015

Yu (alex) Zhang
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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TECHNICAL DOCUMENTATION

INFORMATION DOCUMENT NO. E9*117R02/12*1090*04

According to ECE-Regulation

**UNIFORM PROVISIONS CONCERNING THE APPROVAL OF TYRES WITH REGARD TO
ROLLING SOUND EMISSIONS AND/OR TO ADHENSION ON WET SURFACES AND/OR TO
ROLLING RESISTANCE ACCORDING TO ECE-R117.02 SERIES OF ADMENDMENTS**

ECE Regulation 117

Tread pattern:

LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77;
H612; ECO66; SHW210

This model information document consists of page 1~7

Date: 09/17/2021
Extension: 04

IDIADA CN21090765

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

GENERAL INFORMATION

1 GENERAL

- 1.1 Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.2 Name and address of manufacturing plant(s) : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.3 Brand name(s), Trade description(s) or Trade mark(s) to be used for particular tyre type-approval requested : Brand name: JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210
- 1.4 Type of tyre : LH399

2 TYRE

- 2.1 Tyre classification (class C1, C2, C3) : ~~Class C1~~ / ~~Class C2~~ / Class C3
- 2.2 Tyre structure : ~~diagonal~~ / ~~bias belted~~ / radial
- 2.3 For class C1 tyre , state whether
- 2.3.1.1 Reinforced (or extra load) in case of approval with regarding to rolling sound mission level : see the attached list of Tyre sizes
- 2.3.1.2 Speed category symbol "Q" or below (not including "H") or "R" and above (including "H") in case of snow tyres for approval with regarding to adhesion on wet surfaces : see the attached list of Tyre sizes
- 2.4 For class C2, C3 tyre , state whether
- 2.4.1 Traction tyre : ~~Yes~~ / No
- 2.5. Category of use(normal, snow, special) : normal / ~~snow~~ / ~~special~~
- 2.5.1 Snow tyre for use in severe snow conditions : ~~Yes~~ / No
- 2.6. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. This may be by means of descriptions supplemented by technical data, drawings, photographs and Computer Tomography (CT), and must be sufficient to allow the Type Approval Authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance : Refer to f drawing of the tread pattern

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

- 2.7. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : See attachment drawings of the tyre sidewall

List of attachment:

List of Tyre designation sizes	page 3
Drawing of the tread pattern (for test representative tyres)	page 4-5
The drawings of the tyre sidewall	page 6-7

List of Tyre designation sizes

Brand name or Trade mark: JILUTONG; RICHWAY; ODYKING; TRANSKING; SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; RUNTEK; HUNTERROAD; ECOSTAR
Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

No.	Tyre size	Standard/ Extra load	load	Speed	Approval Number
1	11R22.5	Standard	146/143	L	E9-00.1005
2	<u>11R22.5</u>	<u>Standard</u>	<u>149/146</u>	<u>L</u>	<u>E9-00.6171</u>
3	12R22.5	Standard	152/149	L	E9-00.1006
4	295/80R22.5	Standard	152/149	L	E9-00.1008
5	315/80R22.5	Standard	154/151	L	E9-00.1009
6	315/80R22.5	Standard	156/153	L	E9-00.1067

The worst case for Rolling sound emission test:

TEST SIZE : 315/80R22.5 156/153L

Because of : Largest section width (if the same section width: lowest aspect ratio; largest rim size)

The worst case for Wet adhesion level test:

TEST SIZE : 11R22.5 146/143L

Because of : Any tyre size that meets ten percent (10%) or more above the minimum required wet grip value can represent the whole tyre size range of the tread pattern type.

For any tyre size the limited value for the test tire meet or above: 0.88

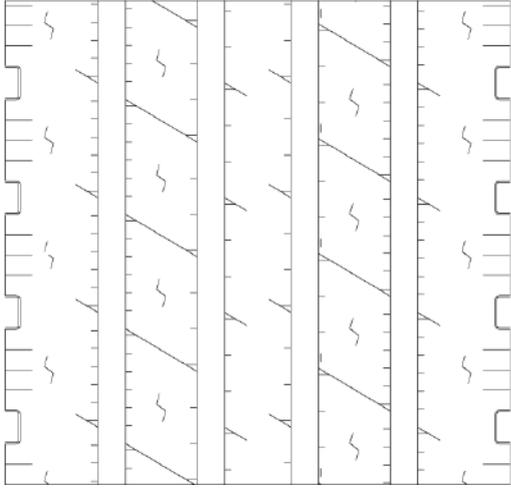
The worst case for Rolling resistance test:

TEST SIZE : 11R22.5 146/143L

Because of : Lowest load index

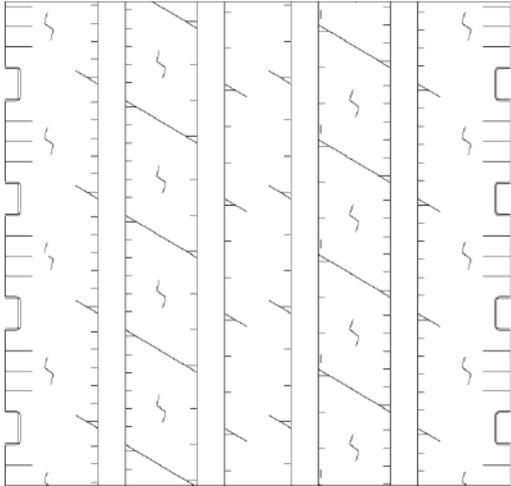
Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Tyre Size	315/80R22.5 156/153L
Market	EU
Pitch number	62
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	74%
Width: main grooves [mm]	12.5
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0
Detail drawing of tread pattern	

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

Drawing of the tread pattern (for measured tyre)

Manufacturer name	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; <u>SHW210</u>
Tyre Size	11R22.5 146/143L
Market	EU
Pitch number	65
Pitch ratio(Max/Min)	1.0000
Groove area ratio [%]	74%
Width: main grooves [mm]	12.0
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0
Detail drawing of tread pattern	

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

The sample of drawings or photographs of the tyre sidewall:

14	PLIES: SIDEWALL 1 STEEL, TREAD 1 STEEL+5STEEL MAX LOAD SINGLE 4000kg (8820 LBS) AT 850 kpa (123 PSI) COLD MAX LOAD DUAL 3650kg (8050 LBS) AT 850 kpa (123 PSI) COLD
13	STANDARD RIM 9.00
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ xxxxxx
9	315/80R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

LH399, RW786, OD176, TG866
SFC66, FL66, S399, PJ399
YW399, FM66, KTL02, CL399
AK77, H612, ECO66, SHW210

315/80R22.5 20PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATDS CROWN, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH399, RW786, OD176 TG866, SFC66, SFC66 FL66, S399, PJ399 YW399, FM66, KTL02 CL399, AK77, H612 ECO66, SHW210	156/153	L	T/L	1076	312	229.0	15.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Tread pattern: LH399; RW786; OD176; TG866; SFC66; FL66; S399; PJ399; YW399; FM66; KTL02; CL399; AK77; H612; ECO66; SHW210

The sample of drawings or photographs of the tyre sidewall:

LH399, RW786, OD176, TG866
SFC66, FL66, S399, PJ399
YW399, FM66, KTL02, CL399
AK77, H612, ECO66, SHW210

14	PLIES SIDEWALL 1 STEEL; TREAD 1 STEEL+STEEL MAX LOAD SINGLE 3000kg (6610 LBS) AT 830 kpa (120 PSI) COLD MAX LOAD DUAL 2725kg (6005 LBS) AT 830 kpa (120 PSI) COLD
13	STANDARD RIM 8.25
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	11R22.5 146/143L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

11R22.5 16PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATDS CROWN, RUNTEK, HUNTERROAD ECOSTAR, SUNWIDE	LH399, RW786, OD176 TG866, SFC66, SFC66 FL66, S399, PJ399 YW399, FM66, KTL02 CL399, AK77, H612 ECO66, SHW210	146/143	L	T/L	1050	279	208.4	15.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						



(1)

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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1349*02**

Nº de extensión / *Extension No.*: **02**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23020661

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH699 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; HUNTERROAD; ECOSTAR; TRANSKING; RUNTEK; SAFCO; WELLPLUS; TECHSHIELD; ODYKING
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : LH699; SFC07; FM07; KTR59; STR600; H101; ECO07; TG107; AK88; SF28; WST677; TS788; OD898
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ / Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 71 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 71 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,09 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.09 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 4,31 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 4.31 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el ~~método de frenado sobre nieve, método de tracción giratoria o método de aceleración~~ ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using ~~the brake on snow method, spin traction method or acceleration method~~ ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





(1)

E9*117R02/14*1349*02

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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake-on-ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CN22050984; CN22110444; CN23020661
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 27/05/2022; 15/11/2022; 15/02/2023
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23020661 / See Test Report Number CN23020661
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are*:
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020661**

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN II
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION II

Solicitante / *Applicant* : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG (CHINA)

Fabricante / *Manufacturer* : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG (CHINA)

Clase del neumático / *Tyre Class* : C3

Categoría de uso / *Category of use* : Normal / *Normal*

Neumático de tracción / *Traction tyre* : N/A / *N/A*

Designación de tipo de neumático /
Tyre type designation : LH699

Marca / *Brand name* : JILUTONG; SAFECESS; FIREMAX; KPATOS;
SUNWIDE; HUNTERROAD; ECOSTAR; TRANSKING; RUNTEK; SAFCO; WELLPLUS; TECHSHIELD;
ODYKING

Nombre comercial / *Commercial name* : LH699; SFC07; FM07; KTR59; STR600; H101;
ECO07; TG107; AK88; SF28; WST677; TS788; OD898

Lugar y fecha de emisión del informe /
Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / *Performed by:*Zhu Yuan
HOMOLOGATION ENGINEERV.B° / *Revised by:*Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020661

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 385/65R22.5 160L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CN22050631, IDIADA, 16/05/2022
See Annex 1, Test report CN22050631, IDIADA, 16/05/2022
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 385/65R22.5 160L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN22050632, IDIADA, 17/05/2022
See Annex 2, Test report CN22050632, IDIADA, 17/05/2022
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 385/65R22.5 160L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CN22050783, IDIADA, 18/05/2022
See Annex 3, Test report CN22050783, IDIADA, 18/05/2022
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2023



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

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ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CN22050631/ ROLLING SOUND EMISSIONS CN22050631

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.3 Marca / Trade name : SAFECES
- 1.1.4 Denominación comercial / Commercial description : SFC07
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre class : C3
- 1.1.7 Medida del neumático / Tyre size : 385/65R22.5 160L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 160 / 4,500
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 900
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t[kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	600,60 ≤ 610,00 ≤ 660,66
Rueda derecha del eje delantero / Front axle right wheel	588,17 ≤ 590,00 ≤ 646,99
Rueda izquierda del eje trasero / Rear axle left wheel	603,36 ≤ 610,00 ≤ 663,70
Rueda derecha del eje trasero / Rear axle right wheel	598,75 ≤ 600,00 ≤ 658,63

$P_t \geq 150$ kPa

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
CN-2205/01443-01	CN-2205/01443-02

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
CN-2205/01443-03	CN-2205/01443-04

1.1.13 Llanta de ensayo / *Test rim* : 11,75 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
CN-1912/02749-01	CN-1912/02749-02

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
CN-1912/02749-03	CN-1912/02749-04

1.1.15 Carga neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	3,256	50 < 72,36 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	3,202	50 < 71,16 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3,268	50 < 72,62 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3,248	50 < 72,18 < 90

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 ≤ 72,08 ≤ 80

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

1.2.1	Marca / Trade name	: HYUNDAI
1.2.2	Modelo / Model	: XCIENT
1.2.3	Año / Year	: 2019
1.2.4	Transmisión / Transmission	: Manual
1.2.5	Batalla [mm] / Wheelbase [mm]	: 3,560

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: CN-2001/01800
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1.3. Equipo de ensayo / Test equipment

1.3.1	Sonometro 1 / Sound level meter 1	: 193663
1.3.2	Sonometro 2 / Sound level meter 2	: 193664
1.3.3	Manómetro / Manometer	: 27230
1.3.4	Báscula / Weight scale	: SCS-5 / SCS-10
1.3.5	Termómetro de la temperatura del asfalto / <i>Track temperature measurement device</i>	: 182330
1.3.6	Anemómetro / <i>Wind speed measurement device</i>	: 193666
1.3.7	Velocímetro / <i>Speed measurement device</i>	: 170358
1.3.8	Termómetro de la temperatura ambiente / <i>Ambient temperature measurement device</i>	: 193659

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.
* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 26,4
 Air temperature T_a [°C]

$5,0 < T_a < 40,0$

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

2.1.2. Temperatura de la superficie de ensayo [°C] / : 36,7
 Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 2,0
 Wind speed [m/s]

Menor a 5 m/s. / Less than 5 m/s.

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 39,6
 Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A)
 Test result – Ambient noise ≥ 10 dB(A)

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

2.1.5 Dirección de viento [°] / : 64,0
 Wind direction [°]

**2.2. Fecha de ensayo y método de verificación según ISO 10844:2014 /
 Date and method of check on compliance of the test surface with ISO 10844:2014:**

- Report number : FM /002 / 21
- Date of check : March 8th 2021
- Issued by : IDIADA

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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 MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,8	N → S	70,6	70,5	26,3	36,8	70,6	70,5
2	64,8	S → N	70,4	70,7	26,5	36,4	70,4	70,7
3	66,6	N → S	70,9	71,1	26,4	36,7	70,9	71,1
4	68,7	S → N	72,6	72,6	26,4	36,9	72,6	72,6
5	72,8	N → S	72,7	72,6	26,3	36,5	72,7	72,6
6	74,3	S → N	73,2	73,4	26,5	36,8	73,2	73,4
7	76,9	N → S	73,9	74,1	26,3	36,7	73,9	74,1
8	78,2	S → N	75,2	74,9	26,3	36,8	75,2	74,9

- 3.1. Pendiente de la recta de regresión / : 45,29
Regression line slope
- 3.2. Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 72,3
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3. Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 71
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4. Valor límite / Limit value :

Categoría de uso / Category of use	C3		
	Fase 1 / Stage 1	Fase 2 / Stage 2	
		Otro / Other	Tracción / Traction
Normal / Normal	76	73	75
Nieve / Snow	78	73	75
Nieve en condiciones severas / Snow (for use in severe Snow conditions)		74	76
Especial / Special	79	75	77

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 MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY

Validate this report with the security code «FXTRX7CY» at: <https://extranet.idiada.com/hom-cve>

IDIADA CN23020661



4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: ICPG, Zhaoyuan, China

Fecha de ensayo / Date of test: 16/05/2022

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CN22050632 / ADHESION ON WET SURFACES CN22050632

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.3 Marca / Trade name : SAFECESS
- 1.1.4 Denominación comercial / Commercial description : SFC07
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre class : C3
- 1.1.7 Medida del neumático / Tyre size : 385/65R22.5 160L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 160 / 4,500
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
CN-2205/01443-01	CN-2205/01443-02

Trasera izquierda / Rear left	Trasera derecha / Rear right
CN-2205/01443-03	CN-2205/01443-04

- 1.1.12 Llanta de ensayo / Test rim : 11,75 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / Front left	Delantera derecha / Front right
CN-1912/02749-01	CN-1912/02749-02

Trasera izquierda / Rear left	Trasera derecha / Rear right
CN-1912/02749-03	CN-1912/02749-04

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1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
CN-2204/01872-01	CN-2204/01872-02

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
CN-2204/01872-03	CN-2204/01872-04

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 9,00 x 22,5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
CN-1912/02743-01	CN-1912/02743-02

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
CN-1912/02743-03	CN-1912/02743-04

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load [kg]* :

SRTT1			Candidato / <i>Candidate</i>			SRTT2		
DI / <i>FL</i>	3,276	87,4% Qr	DI / <i>FL</i>	3,316	73,7% Qr	DI / <i>FL</i>	3,306	88,2% Qr
DD / <i>FR</i>	3,206	85,5% Qr	DD / <i>FR</i>	3,212	71,4% Qr	DD / <i>FR</i>	3,190	85,1% Qr
TI / <i>RL</i>	3,240	86,4% Qr	TI / <i>RL</i>	3,252	72,3% Qr	TI / <i>RL</i>	3,254	86,8% Qr
TD / <i>RR</i>	3,268	87,1% Qr	TD / <i>RR</i>	3,362	74,7% Qr	TD / <i>RR</i>	3,280	87,5% Qr

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / ~~NO-CUMPLE~~
 FULFILS / ~~NOT-FULFILS~~

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : HYUNDAI
- 1.2.2 Modelo / Model : XCIENT
- 1.2.3 Año / Year : 2019
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3,560
- 1.2.6 Referencia interna del vehículo / Vehicle internal reference : CN-2001/01800
- 1.2.7 Configuración del vehículo (ISO 15222) / Vehicle configuration (ISO 15222) : Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / Configuration 1 (4 candidate tyres in test vehicle)

1.3. Presión de inflado de la prueba / Test inflation pressure

- 1.4.1 Presión de inflado de SRTT y neumático de control / SRTT and control tyre inflation pressure [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	760	740	750	758
SRTT 2	769	735	754	761

Control / Control	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
DI / FL	3,316	4,500	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	1	630
DD / FR	3,212	4,500		1	630
TI / RL	3,252	4,500	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	1	630
TD / RR	3,362	4,500		1	630

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / Manometer : 27230
- 1.4.2 Báscula / Weight scale : SCS-5/ SCS-10
- 1.4.3 Termómetro / Thermometer : 182330

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- 1.4.4 Dispositivo para medir la temperatura de pista : 182329
Track temperature measurement device
- 1.4.5 Dispositivo para medir la velocidad/ : VBOX Sport 07013178
Speed measurement device

2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / Location : Straight line braking B, ICPG
- 2.2. Fecha de verificación de la pista de ensayo / : April 1st 2022
Date of check on compliance of the test surface:
- 2.3. Características de la pista de ensayo /
Test track characteristics
- 2.3.1 Profundidad grano de arena / Sand depth [mm] : 0,86
- 2.3.2 BPN : 52,40
- 2.3.3 Profundidad del agua / Water depth [mm] : Promedio de 1,18 / Average of 1,18
- 2.4. Método de ensayo / Test method : Vehículo / Vehicle
- 2.5. Temperatura del aire T_a [°C] / : 29,4
Air temperature T_a [°C]
- 2.6. Temperatura de la pista de ensayo T_w [°C] :
Wet surface temperature T_w [°C]

$$5,0 \leq T_w \leq 35,0$$

SRTT1	Candidato / Candidate	SRTT2
26,4	27,6	27,3

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

Variación durante el ensayo inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Candidato / Candidate		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	23,05	5,36	21,43	5,76	23,24	5,31
2	23,29	5,30	20,90	5,91	23,15	5,33
3	23,41	5,27	21,38	5,77	23,90	5,17
4	-	-	21,72	5,68	-	-
5	-	-	21,09	5,85	-	-
6	-	-	21,83	5,66	-	-

Coefficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
0,79	1,67	1,73
< 3%	< 3%	< 3%

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet Grip Index	Fuerza pedal / Pedal force [N]
1	60 - 20	S - N	315/70R22.5	---	5,31 m/s ²	---	> 600
4	60 - 20	S - N	---	385/65R22.5	5,77 m/s ²	1,09	> 600
5	60 - 20	S - N	315/70R22.5	---	5,27 m/s ²	---	> 600

Wet grip index G = 1,09

3.1. Valor límite / Limit value:

Categoría de uso / Category of use	Índice de adherencia en mojado / Wet Grip Index (+10% Wet Grip Index) (G)			
	C2		C3	
	Otro / Other	Tracción / Traction	Otro / Other	Tracción / Traction
Normal / Normal	≥ 0.95 (≥ 1.05)	≥ 0.85 (≥ 0.94)	≥ 0.80 (≥ 0.88)	≥ 0.65 (≥ 0.72)
Nieve / Snow			≥ 0.65 (≥ 0.72)	
Nieve en condiciones severas / Snow (for use in severe Snow conditions)	≥ 0.85 (≥ 0.94)		≥ 0.65 (≥ 0.72)	
Especial / Special				

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4. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: ICPG, Zhaoyuan, China

Fecha de ensayo / Date of test: 17/05/2022

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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA / ROLLING RESISTANCE CN22050783

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / *Applicant* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.2 Fabricante / *Manufacturer* : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA).
- 1.1.3 Marca / *Trade Name* : SAFECESS
- 1.1.4 Denominación comercial / *Commercial description* : SFC07
- 1.1.5 Categoría de uso / *Category of use* : Normal / *Normal*
- 1.1.6 Clase del neumático / *Tyre Class* : C3
- 1.1.7 Medida del neumático / *Tyre size* : 385/65R22.5 160L
- 1.1.8 Estructura del neumático / *Tyre structure* : Radial / *Radial*
- 1.1.9 Índice de carga/Masa correspondiente / *Load index / Corresponding mass Q_r [kg]* : 160 / 4,500
- 1.1.10 Presión de inflado / *Inflation pressure [kPa]* : 900
- 1.1.11 Referencia interna de neumático de ensayo / *Test tyre internal reference* : CN22050783
- 1.1.12 Llanta de ensayo / *Test rim* : 11,75 x 22,5
- 1.1.13 Referencia interna de la llanta de ensayo / *Test rim internal reference* : RIM11,75 x 22,5
- 1.1.14 Material de la llanta de ensayo / *Test rim material* : Steel

1.2. Datos de la máquina de ensayo / Test machine data:

- 1.2.1 Identificación / *Identification* : JD-029

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1.2.2 Diámetro de tambor / *Drum diameter* [mm] : 2,000

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / *Surface* : Acero pulido / *Smooth steel*

1.2.4 Rugosidad / *Roughness* [μm] : ≤ 6.3

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / *Test data*

1.3.1 Método de medida / *Measurement method* : Fuerza / *Force*

1.3.2 Velocidad de ensayo / *Test speed* [km/h] : 80

C1: 80 km/h (todos los índices de velocidad y de carga);

C1: 80 km/h (all speed and load symbols)

C2/C3: 80km/h (todos los símbolos de velocidad e índices de carga < o igual a 121);

C2/C3: 80 km/h (all speed symbol and load symbol < equal to 121)

C3: 60 km/h (J:100 km/h and lower or tyres not market with speed symbol and load symbol > to 121);

C3: 60 km/h (J:100 km/h y menor o neumáticos no marcados con símbolos de velocidad e índices de carga > a 121)

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);

C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga /
Masa correspondiente Q_i [kg] : 160 / 4,500
Load index /
Corresponding mass Q_i [kg]

1.3.4 Carga de ensayo / *Test load* [kg / N] : 3,825 / 37,510

C1 (% del máximo índice de carga) : 80

C1 (% of maximum load capacity)

C2/C3 (% de carga simple) : 85 (*)

C2/C3 (% of single load)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

() as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre*

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.3.5 Presión de inflado en el ensayo / : 900
Test inflation pressure, initial [kPa]

C1: 210 kPa si es estándar / 250 kPa si es reforzado

C1: 210 kPa if standard/ 250 kPa if reinforced

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application ()*

(*): *inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.*

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático
 a la superficie exterior del tambor
 bajo condiciones de estado estacionario
 durante ensayo(r_L) / : 0,51
*Distance from the tyre axis to the
 drum outer surface under
 steady state conditions during test(r_L)*

1.3.7 Distancia del eje del neumático
 a la superficie exterior del tambor
 bajo condiciones de estado estacionario
 durante parásitas (r_L) / : 0,54
*Distance from the tyre axis to the
 drum outer surface under
 steady state conditions during skim test(r_L)*

1.3.8 Temperatura ambiente / : 25,4
Ambient temperature T_{am} [°C]

$20,0 \leq T_{am} \leq 30,0$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

1.3.9 Carga en el ensayo de parásitas / : 400,5
Skim test load [N]

$C1 \leq 200 \text{ N}$

$C2 \leq 200 \text{ N}$ si es medurado en máquina C1 o $C2 \leq 500 \text{ N}$ si es medurado en máquina C3

$C2 \leq 200 \text{ N}$ if measured in C1 machine or $C2 \leq 500 \text{ N}$ if measured in C3 machine

$C3 \leq 500 \text{ N}$

CUMPLE / NO-CUMPLE
 FULFILS / NOT-FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.

THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.

THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.

MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



- 1.3.10 Fuerza en el eje / *Spindle force (Ft)* [N] : 117,08
- 1.3.11 Fuerza en el eje durante parásitas / *Spindle force during skim test (Fpl)* [N] : 9,77
- 1.3.12 Pérdida de parásitas / *Parasitic loss (Fpl)* [N] : 15,01
- 1.3.13 Fuerza de resistencia a rodadura / *Rolling resistance forcé (Fr)* [N] : 161,25

2. RESULTADOS DE ENSAYO / TEST RESULTS

- 2.1. Coeficiente de resistencia a la rodadura / *Rolling resistance coefficient*
- 2.1.1 Valor inicial / *Initial value* [N/kN] : 4,30
- 2.1.2 Valor corregido por temperatura / *Temperature corrected value* [N/kN] : 4,31
- 2.1.3 Valor corregido por diámetro de tambor y temperatura / *Temperature and drum diameter corrected value* [N/kN] : 4,31

Coeficiente de resistencia a la rodadura / *Rolling resistance coefficient* Cr [N/kN] = 4,31

- 2.2. Valor límite / *Limit value* [N/kN] :

	Fase 1 / <i>Stage 1</i>	Fase 2 / <i>Stage 2</i>
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

Para “neumáticos de nieve en condiciones severas”, los límites deben incrementarse en 1 N/kN. / *For "snow tyre for use in severe snow conditions", the limits shall be increased by 1 N/kN.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
 * THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY



3. FOTOS DEL NEUMÁTICO DE ENSAYO / TEST TYRE PICTURES



Foto 1 / Picture 1. Flanco / Sidewall



Foto 2 / Picture 2. Banda de rodadura / Tread pattern

Lugar de ensayo / Place of test: QTC (Qingdao, China)

Fecha de ensayo / Date of test: 18/05/2022

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
 THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.
 * QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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 * EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS.
 MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY

TECHNICAL DOCUMENTATION

Type of tyre:

LH699

Date : Feb 10. 2023

Ext. : 02

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL

- 1.1. The performance characteristics to be assessed for the tyre type: : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
- 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner; Crossing of Xihuan Road and Jinguang Street); Chenming Industrial District; Shouguang 262719; Weifang; SHANDONG(CHINA)
- 1.3. If applicable; name and address of manufacturer's representative : N.A.
- 1.4. Brand name(s)/Trademark(s) : JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; HUNTERROAD; ECOSTAR; TRANSKING; RUNTEK; SAFCO; WELLPLUS; TECHSHIELD; ODYKING
- 1.5. Trade description(s)/Commercial name(s) : LH699; SFC07; FM07; KTR59; STR600; H101; ECO07; TG107; AK88; SF28; WST677; TS788; OD898

1.6. Type of tyre : LH699

2. TYRE

- 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
- 2.2. Category of use : Normal/~~snow/special~~ ⁽¹⁾
- 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
- 2.2.2. For Class C2; C3 tyre; whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
- 2.3. Tyre structure : ~~Diagonal/bias-belted~~/radial ⁽¹⁾
- 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions; adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1

3. The application for approval shall be accompanied (in triplicate) by

- 3.1. Details of the major features; with respect to the effects on the performance (i.e. rolling sound emission level; adhesion on wet surfaces; rolling resistance and snow grip) of the tyres; including the tread pattern; included in the designated range of tyre sizes. : Refer to Attachment 2
- 3.2. Drawings or photographs of the tyre sidewall; showing the information given in paragraph : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

3.1.8. above and the approval marking referred to in paragraph 4.

3.3. In the case of applications relating to special use tyres; a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s): JILUTONG; SAFECESS; FIREMAX; KPATOS; SUNWIDE; HUNTERROAD; ECOSTAR; TRANSKING; RUNTEK; SAFCO; WELLPLUS; TECHSHIELD; ODYKING;

Trade description(s)/Commercial name(s):

LH699; SFC07; FM07; KTR59; STR600; H101; ECO07; TG107; AK88; SF28; WST677; TS788; OD898

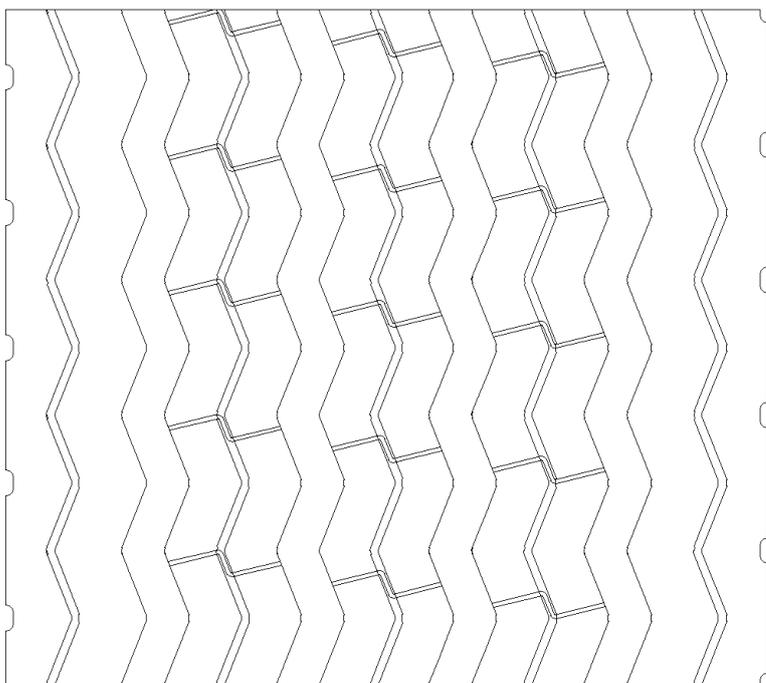
	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1010	385/65R22.5 160L	N.A.	73	0.8	6.5	N/A
2	<u>E9-00.6535</u>	<u>385/65R22.5 160L</u>	<u>N.A.</u>	<u>73</u>	<u>0.8</u>	<u>6.5</u>	N/A
3							
4							
5							
6							
7							
8							
9							
10							
11							
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18							
19							
20							

iDiADA CN23020661

Worst Case Selection

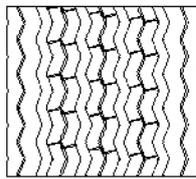
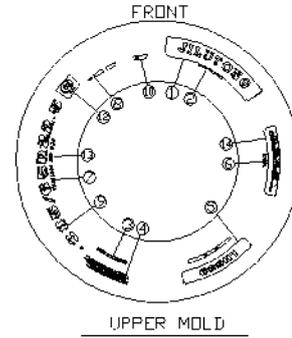
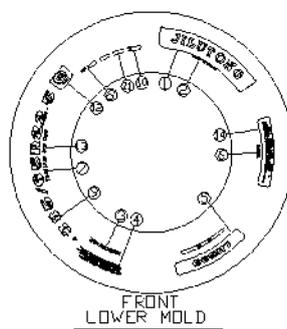
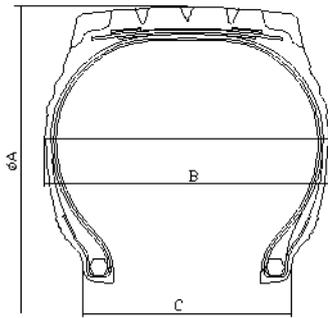
Test size for rolling sound	:	385/65R22.5 160L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	385/65R22.5 160L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.09$ (Wet grip test result)
Test size for rolling resistance	:	385/65R22.5 160L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	÷	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD
Pattern name	: LH699; SFC07; FM07; KTR59; STR600; H101; ECO07; TG107; AK88; SF28; WST677; TS788; OD898;
Tyre Size	: 385/65R22.5 160L
Market	: EU
Pitch number	: 66
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 29%
Width: main grooves [mm]	: 14.9
Depth: center groove [mm]	: 15.0
Depth: shoulder groove [mm]	: 15.0
Tyre mass [kg]	66.0
Tread depth [mm]	15.0
Tread width [mm]	285
Curvature radius of tread crown [mm]	1500
Tyre outer diameter[mm]	1072
Tread plies	4 PLYS STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise; wet grip and snow grip performance)



LH699, SFC07, FM07, KTR59
STR600, H101, ECO07, TG107
AK88, SFC28, WST677, TS788
DD898

14	FLIC: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4500kg (9920 LBS) AT 900 kpa (130 PSI) COLL
13	STANDARD RIM 11.75
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	385/65R22.5 160L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

385/65R22.5 20PR	JILUTONG, SAFECROSS, FIREMAX KPATOS, SUNWIDE, HUNTERROAD ECOSTAR, TRANSHING, RUNTEK SAFCO, WELLPUS, TECHSHIELD DDYKING	LH699, SFC07, FM07 KTR59, STR600, H101 ECO07, TG107, AK88 SF28, WST677, TS788 DD898	160	L	T/L	1072	389	298	15
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						



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Relativa a / Concerning:

- homologación de tipo / ~~APPROVAL GRANTED~~ ⁽²⁾
- extensión de homologación de tipo / ~~APPROVAL EXTENDED~~ ⁽²⁾
- denegación de homologación de tipo / ~~APPROVAL REFUSED~~ ⁽²⁾
- retirada de homologación de tipo / ~~APPROVAL WITHDRAWN~~ ⁽²⁾
- producción definitivamente abandonada / ~~production definitively discontinued~~ ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1092*06**

Nº de extensión / *Extension No.*: **06**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : CN23020659

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre
designation</i> | : LH668 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING;
TRANSKING; SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN;
HUNTERROAD; ECOSTAR
- 6.2. Denominación(es) comercial(es) / Trade
description(s)/commercial name(s) of the type of tyre : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101;
CL101; H701; ECO18; SMX300
7. Servicio técnico autorizado a efectos de homologación o
comprobación de los ensayos de conformidad/
Technical service approved for purposes of approval or of
verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (fase 1/fase 2), nivel de adherencia en superficie mojada, nivel de
resistencia a la rodadura (fase 1/fase 2) ⁽²⁾ /
Performances approved: sound level at (stage 1/stage 2), wet adhesion level, rolling resistance level (stage
1/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo
en el Apéndice 1 del Anexo 3: 73 dB(A) a la velocidad de referencia de 70/80 km/h ⁽²⁾ / Sound level of the
representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to
Annex 3: 73 dB(A) at reference speed of 70/80 km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este
Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1,20 (G) mediante el método
de vehículo o de remolque ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this
Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.20 (G) using the vehicle or trailer ⁽²⁾
method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento,
de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 6,19 N/kN / Rolling resistance level
of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix
1 to Annex 6: 6.19 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num.
117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en
nieve) usando el método de frenado sobre nieve, método de tracción giratoria o método de aceleración ⁽²⁾ / Snow
performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the
test report in the appendix 3 to Annex 7: N/A (snow grip index) using the brake on snow method, spin traction
method or acceleration method ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el método de frenado sobre nieve / *Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the brake on ice method.* ⁽²⁾
9. Número de informe emitido por el Servicio Técnico / *Number of report issued by the Technical Service* : CV15100481; CV16100663; CN17050370; CV18070697; CV18080073; CN19070753; CN21090766; CN23020659
10. Fecha del informe emitido por este Servicio / *Date of report issued by that service* : 02/11/2015; 20/10/2016; 26/05/2017; 24/07/2018; 02/08/2018; 29/07/2019; 28/09/2021; 15/02/2023
11. Motivo(s) de la extensión (en su caso) / *Reason(s) of extension (if applicable)* : Ver informe de ensayo número CN23020659 / *See Test Report Number CN23020659*
12. Observaciones / *Any remarks* : N/A
13. Lugar / *Place* : Madrid
14. Fecha / *Date* : Ver firma electrónica / *See electronic signature*
15. Firma / *Signature*: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020659**

REGLAMENTO CEPE/ONU 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
EXTENSIÓN VI
UN/ECE REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE
EXTENSION VI

Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG(CHINA)

Clase del neumático / Tyre Class : C3
Categoría de uso / Category of use : Normal / Normal

Neumático de tracción / Traction tyre : No / No

Designación de tipo de neumático /
Tyre type designation : LH668

Marca / Brand name : JILUTONG; RICHWAY; ODYKING;
TRANSKING, SAFECESS; SUNFULCESS;
FIRELION; SUNWIDE; PANJI; YUWANG;
FIREMAX; KPATOS; CROWN; HUNTERROAD;
ECOSTAR

Nombre comercial / Commercial name : LH668; RW300; OD901; TG118; SFC18; FL18;
S668; PJ668; YW668; FM18; KTA01; CT101; CL101;
H701; ECO18; SMX300

Lugar y fecha de emisión del informe /
Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 15/02/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” y/o “prestaciones en nieve” según el REGLAMENTO CEPE/ONU 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, el procedimiento de prueba para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN/ECE REGULATION 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

V.Bº / Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. /THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.



INFORME/REPORT N° CN23020659

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 13R22.5 156/153L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CV15070679, IDIADA, 10/08/2015
See Annex 1, Test report CV15070679, IDIADA, 10/08/2015
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 9.00R20 144/142L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CV15100879, IDIADA, 08/08/2015
See Annex 2, Test report CV15100879, IDIADA, 08/08/2015
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 7.00R16LT 118/114L (Índice de carga más bajo/ *Lowest load index*)
Ver Anexo 3, Informe CV15090243, IDIADA, 22/09/2015
See Annex 3, Test report CV15090243, IDIADA, 22/09/2015
 - 2.4. Adherencia en nieve / *Snow performance* : N/A
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
 - Inclusión de nuevas medidas / *Addition of new sizes*
 - Actualización del número de suplemento reglamentario / *Upgrade of regulation supplement number*
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 /*Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 15/02/2022



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS ENSAYOS HAN SIDO REALIZADOS POR IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORIO ACREDITADO POR ENAC CON ACREDITACIÓN N° 35/LE159. / *THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.*

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

* EL LABORATORIO HA CALCULADO LA INCERTIDUMBRE DE MEDIDA ASOCIADA A LOS RESULTADOS. / *MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.*



ANEXO 1 AL INFORME / ANNEX 1 TO THE TEST REPORT
EMISIÓN DE RUIDO EN LA RODADURA CV15070679 / ROLLING SOUND EMISSIONS CV15070679

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : TRANSKING
- 1.1.4 Denominación comercial / Commercial description : TG118
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 13R22.5 156/153L
- 1.1.8 Estructura del neumático / Tyre structure : Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] / Load index / Corresponding mass Q_r [kg] : 156 / 4.000
- 1.1.10 Presión de referencia P_r [kPa] / Reference inflation pressure P_r [kPa] : 850
- 1.1.11 Presión de inflado P_t [kPa] / Test inflation pressure P_t [kPa] :

	P_t [kPa] valor admisible / P_t [kPa] admissible values
Rueda izquierda del eje delantero / Front axle left wheel	565,22 ≤ 590,00 ≤ 621,74
Rueda derecha del eje delantero / Front axle right wheel	567,42 ≤ 590,00 ≤ 624,16
Rueda izquierda del eje trasero / Rear axle left wheel	623,57 ≤ 650,00 ≤ 685,93
Rueda derecha del eje trasero / Rear axle right wheel	632,57 ≤ 660,00 ≤ 695,83

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 THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
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 IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.1.12 Referencia interna del neumático / :
Test tyre internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1507/511	HVI-1507/512

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1507/513	HVI-1507/514

1.1.13 Llanta de ensayo / *Test rim* : 9,00 x 22,5

1.1.14 Referencia interna de la llanta de ensayo / :
Test rim internal reference

Delantero izquierda / <i>Front left</i>	Delantero derecha / <i>Front right</i>
HVI-1205/675	HVI-1205/676

Trasero izquierda / <i>Rear left</i>	Trasero derecha / <i>Rear right</i>
HVI-1205/677	HVI-1205/678

1.1.15 Carga de los neumáticos de ensayo [kg] / :
Test tyre load [kg]

	kg	Q_t [N] / % $\frac{Q_t}{Q_r}$
Eje delantero rueda izquierda / <i>Front axle left wheel</i>	2.886	50 < 72,15 < 90
Eje delantero rueda derecha / <i>Front axle right wheel</i>	2.895	50 < 72,38 < 90
Eje trasero rueda izquierda / <i>Rear axle left wheel</i>	3.122	50 < 78,05 < 90
Eje trasero rueda derecha / <i>Rear axle right wheel</i>	3.158	50 < 78,95 < 90

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
70 < 75,38 < 80

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

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1.2. Vehículo de ensayo / Test vehicle

- 1.2.1 Marca / Trade name : RENAULT
- 1.2.2 Modelo / Model : PREMIUM
- 1.2.3 Año / Year : 2005
- 1.2.4 Transmisión / Transmission : Manual
- 1.2.5 Batalla [mm] / Wheelbase [mm] : 3.650

Para Clase C3 menor a 5.000 mm. / For Class C3 less than 5,000 mm.

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

- 1.2.6 Referencia interna del vehículo /
Vehicle internal reference : HVI-1205/350

1.3. Equipo de ensayo / Test equipment

- 1.3.1 Sonómetro 1 / Sound level meter 1 : 121738
- 1.3.2 Sonómetro 2 / Sound level meter 2 : 121739
- 1.3.3 Manómetro / Manometer : 140070
- 1.3.4 Báscula / Weight scale : 09057
- 1.3.5 Termómetro de la temperatura del asfalto /
Track temperature measurement device : 141537
- 1.3.6 Anemómetro /
Wind speed measurement device : 150095
- 1.3.7 Velocímetro /
Speed measurement device : 109547
- 1.3.8 Termómetro de la temperatura ambiente /
Ambient temperature measurement device : 10004

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2. PISTA DE ENSAYO / TEST TRACK

2.1. Ambiente / Environment

2.1.1 Temperatura del aire T_a [°C] / : 30,9
Air temperature T_a [°C]

$5,0 < T_a < 40,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.2 Temperatura de la superficie de ensayo [°C]: 48,6
Test surface temperature T_s [°C]

$5,0 \leq T_s \leq 50,0$

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.3 Velocidad del viento [m/s] / : 1,9
Wind speed [m/s]

Menor a 5 m/s. / *Less than 5 m/s.*

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.4 Ruido ambiente [dB(A)] / : 42,1
Ambient noise [dB(A)]

Resultado de Ensayo – Ruido ambiente ≥ 10 dB(A) /
Test result – Ambient noise ≥ 10 dB(A)

~~CUMPLE / NO-CUMPLE~~
~~FULFILS / NOT-FULFILS~~

2.1.5 Presión barométrica [kPa] / : 100,19
Barometer pressure [kPa]

2.1.6 Humedad relativa [%] / : 58,15
Relative humidity [%]

2.1.7 Dirección de viento [°] / : 176,0
Wind direction [°]

2.2. Fecha de ensayo y método de verificación según ISO 10844:2011 /

Date and method of check on compliance of the test surface with ISO 10844:2011:

- 25 de mayo de 2015 / *May 25th 2015*
 - Emitido por / *Issued by* : IDIADA

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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3. RESULTADOS DE ENSAYO / TEST RESULTS

Velocidad de referencia [km/h] / : 70
Reference Speed: v_{ref} [km/h]
 Rango de velocidades [km/h] / : 60,0 - 80,0
Range Speed [km/h]

Pasada Núm. / Run No.	Velocidad de ensayo / Test speed [km/h]	Sentido de pasada / Direction of run	Medida de sonido lado izquierdo / Sound level left measured [dB(A)]	Medida de sonido lado derecho / Sound level right measured [dB(A)]	Temp. aire / Air temp. [°C]	Temp. superficie / Surface temp. [°C]	Medida de sonido lado izquierdo corrección temp. / Sound level left temp. corrected [dB(A)]	Medida de sonido lado derecho corrección temp. / Sound level right temp. corrected [dB(A)]
1	62,5	W → E	72,5	72,9	30,4	48,5	72,5	72,9
2	64,7	W → E	73,8	73,8	30,7	48,5	73,8	73,8
3	66,6	W → E	73,6	74,0	31,5	48,5	73,6	74,0
4	68,8	W → E	74,6	74,5	31,0	48,6	74,6	74,5
5	72,6	W → E	75,1	75,3	30,8	48,6	75,1	75,3
6	74,5	W → E	75,4	75,5	30,9	48,6	75,4	75,5
7	76,8	W → E	76,5	76,4	30,8	48,7	76,5	76,4
8	78,4	W → E	77,2	76,7	30,8	48,6	77,2	76,7

- 3.1.** Pendiente de la recta de regresión / : 39,15
Regression line slope
- 3.2.** Nivel de ruido después de la corrección de temperatura de acuerdo con el párrafo 4.3 del Anexo 3 [dB(A)] / : 74,8
Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)]
- 3.3.** Nivel de ruido según párrafo 4.4 y 4.5 del Anexo 3 [dB(A)] / : 73
Sound level according to paragraph 4.4. and 4.5. of Annex 3 [dB(A)]
- 3.4.** Valor límite para la clase C3 de neumático y Stage 2: 73 dB(A) / : 73 dB (A)
Limit value for the Class C3 tyre Stage 2: 73 dB (A)

CUMPLE / NO CUMPLE
 FULFILS / NOT FULFILS

Lugar de ensayo / Place of test: L'Albornar (Santa Oliva)

Fecha de ensayo / Date of test: 10/08/2015



Zhu Yuan
 HOMOLOGATION ENGINEER

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ANEXO 2 AL INFORME / ANNEX 2 TO THE TEST REPORT
ADHERENCIA EN SUPERFICIE MOJADA CV15100879 / ADHESION ON WET SURFACES CV15100879

1. DATOS DE ENSAYO / TEST DATA

1.1. Características del neumático de ensayo / Test tyre details

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : PANJI
- 1.1.4 Denominación comercial / Commercial description : PJ668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase del neumático / Tyre Class : C3
- 1.1.7 Medida del neumático / Tyre size : 9.00R20 144/142L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 144 / 2.800
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado / Inflation pressure [kPa] : 900
- 1.1.11 Referencia interna del neumático / Test tyre internal reference :

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1507/515	HVI-1507/516

Trasera izquierda / Rear left	Trasera derecha / Rear right
HVI-1507/517	HVI-1507/518

- 1.1.12 Llanta de ensayo / Test rim : 7.50 x 20
- 1.1.13 Referencia interna de la llanta de ensayo :
Test rim internal reference

Delantera izquierda / Front left	Delantera derecha / Front right
HVI-1306/39	HVI-1306/40

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Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1306/42	HVI-1306/41

1.1.14 Identificación del SRTT / *SRTT identification* : MICHELIN 245/70 R19.5 - ASTM F 2871

1.1.15 Referencia interna del SRTT / *SRTT internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1304/137	HVI-1304/138

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1304/139	HVI-1304/140

1.1.16 Llanta de ensayo del SRTT / *Test SRTT rim* : 7.50 x 19.5

1.1.17 Referencia interna de la llanta del SRTT / *Test SRTT rim internal reference* :

Delantera izquierda / <i>Front left</i>	Delantera derecha / <i>Front right</i>
HVI-1206/279	HVI-1206/278

Trasera izquierda / <i>Rear left</i>	Trasera derecha / <i>Rear right</i>
HVI-1206/276	HVI-1206/277

1.1.18 Carga neumáticos de ensayo [kg] / *Test tyre load* [kg] :

SRTT 1			Candidate			SRTT 2		
FL	2.210	98,7% Q _r	FL	2.245	80,2% Q _r	FL	2.208	98,6% Q _r
FR	2.204	98,4% Q _r	FR	2.243	80,1% Q _r	FR	2.203	98,3% Q _r
RL	2.192	97,9% Q _r	RL	2.239	80,0% Q _r	RL	2.190	97,8% Q _r
RR	2.190	97,8% Q _r	RR	2.236	79,9% Q _r	RR	2.191	97,8% Q _r

Entre el 60 y el 100 por ciento de la carga correspondiente al índice de carga del neumático.
Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

CUMPLE / NO-CUMPLE
 FULFILS / NOT FULFILS

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCIÓN PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA.
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**1.2. Vehículo de ensayo / Test vehicle**

1.2.1	Marca / Trade name	: RENAULT
1.2.2	Model	: PREMIUM
1.2.3	Year	: 2005
1.2.4	Transmisión / Transmission	: Manual / Manual
1.2.5	Batalla / Wheelbase [mm]	: 3.650
1.2.6	Referencia interna del vehículo <i>Vehicle internal reference</i>	: HVI-1301/641
1.2.7	Configuración del vehículo (ISO 15222) / <i>Vehicle configuration (ISO 15222)</i>	: Configuración 1 (4 neumáticos candidatos en el vehículo de ensayo / <i>Configuration 1 (4 candidate tyres in test vehicle</i>

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1.3. Presión de inflado de la prueba /

1.3.1 Presión de inflado de SRTT y neumático candidato / *SRTT and candidate tyre inflation pressure* [kPa]:

	DI / FL	DD / FR	TI / RL	TD / RR
SRTT 1	747	745	740	739
SRTT 2	746	744	739	739

Candidato / Candidate	Q _t [kg]	Q _r [kg]	Condiciones / Conditions	Condición usada / Condition Used	Presión de inflado / Inflation pressure P _t [kPa]
FL	2.245	2.800	1- If Q _t < 75% Q _r then: P_t = (0,7) x P_r	2	683
FR	2.243	2.800		2	682
RL	2.239	2.800	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1,25}	2	681
RR	2.236	2.800		2	679

1.4. Equipo de ensayo / Test equipment

- 1.4.1 Manómetro / *Manometer* : 140071
- 1.5.2 Báscula / *Weight scale* : 09057
- 1.4.3 Termómetro / *Thermometer* : 06268-1
- 1.4.4 Dispositivo para medir la temperatura de pista / *Track temperature measurement device* : 150129, 150129-1
- 1.4.5 Dispositivo para medir la velocidad / *Speed measurement device* : 130204
- 1.4.6 Pedal de fuerza / *Force pedal* : 05610

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2. PISTA DE ENSAYO / TEST TRACK

- 2.1. Ubicación / Location : Pista ABS / ABS Surface, IDIADA
- 2.2. Fecha de verificación de la pista de ensayo / : 7 de enero de 2015 / January 7th 2015
Date of check on compliance of the test surface:
- 2.3. Características de la pista de ensayo /
Test track characteristics
 - 2.3.1 Profundidad grano de arena / Sand depth [mm] : 0,97
 - 2.3.2 BPN : 56
 - 2.3.3 Profundidad del agua / Water depth [mm] : Entre 0,75 a 1,00 / Between 0.75 and 1.00
- 2.4. Método de ensayo / Test method : Vehículo / Vehicle
- 2.5. Temperatura del aire T_a [°C] /
Air temperature T_a [°C] : 31,1
- 2.6. Temperatura de la pista de ensayo T_w [°C] :
Wet surface temperature T_w [°C]

5,0 ≤ T_w ≤ 35,0

SRTT 1	Candidato / Candidate	SRTT 2
28,0	29,2	32,5

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Variación durante los ensayos inferior a 10°C /
Variation during the test less than 10 °C

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

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THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.

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3. RESULTADOS DE ENSAYO / TEST RESULTS

Pasada / Test run	SRTT 1		Neumático candidato / Candidate Tyre		SRTT 2	
	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]	Distancia de frenado / Braking distance [m]	Deceleración media / Average deceleration [m/s ²]
1	29,87	4,13	24,84	4,97	29,19	4,23
2	29,32	4,21	24,12	5,12	29,83	4,14
3	29,09	4,24	24,92	4,95	29,73	4,15
4	-	-	24,25	5,09	-	-
5	-	-	24,17	5,11	-	-
6	-	-	24,83	4,97	-	-

Coefficiente de variación / Coefficient of variation:

SRTT 1	Candidato / Candidate	SRTT 2
1,36	1,54	1,17
< 3%	< 3%	< 3%

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

Validate this report with the security code «UVOPNHMK» at: <https://extranet.idiada.com/hom-cve>

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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Pasada / Test run	Velocidad de ensayo / Test Speed [km/h]	Dirección ensayo / Direction of run	SRTT	Neumático candidato / Candidate tyre	Mean fully developed deceleration (mfdd)	Índice de adherencia en mojado / Wet grip index	Fuerza pedal / Pedal force [N]
1	60 - 20	W - E	245/70R19.5	---	4,20 m/s ²	---	> 600
3	60 - 20	W - E	---	9.00R20	5,04 m/s ²	1,20	> 600
4	60 - 20	W - E	245/70R19.5	---	4,17 m/s ²	---	> 600

Índice de adherencia en mojado del neumático candidato / *Wet grip index of the candidate tyre*

$$G(T) = 1,20$$

Índice de adherencia en mojado (para el peor caso)

$$Wet\ grip\ index\ (Worst\ case) \geq 0,80$$

Índice de adherencia en mojado (cualquier medida)

$$Wet\ grip\ index\ (Any\ size) \geq 0,88$$

CUMPLE / ~~NO CUMPLE~~
FULFILS / ~~NOT FULFILS~~

Lugar del ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha del ensayo / *Date of test*: 08/08/2015



Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN ÚNICAMENTE A LA MUESTRA ENSAYADA.
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ANEXO 3 AL INFORME / ANNEX 3 TO THE TEST REPORT
RESISTENCIA A LA RODADURA CV15090243 / ROLLING RESISTANCE CV15090243

1. DATOS DE ENSAYO / TEST DATA

1.1. Detalles del neumático de ensayo / Test tyre details:

- 1.1.1 Solicitante / Applicant : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.2 Fabricante / Manufacturer : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang City, Shandong Province (CHINA)
- 1.1.3 Marca / Trade name : YUWANG
- 1.1.4 Denominación comercial / Commercial description : YW668
- 1.1.5 Categoría de uso / Category of use : Normal / Normal
- 1.1.6 Clase de neumático / Tyre Class : C3
- 1.1.7 Tamaño del neumático / Tyre size : 7.00R16LT 118/114L
- 1.1.8 Estructura del neumático / Tyre structure : Radial / Radial
- 1.1.9 Índice de carga / Masa correspondiente Q_r [kg] : 118 / 1.320
Load index / Corresponding mass Q_r [kg]
- 1.1.10 Presión de inflado [kPa] / Inflation pressure [kPa] : 770
- 1.1.11 Referencia interna de neumático de ensayo / Test tyre internal reference : HVI-1509/404
- 1.1.12 Llanta de ensayo / Test rim : 6,00 x 16
- 1.1.13 Referencia interna de la llanta de ensayo / Test rim internal reference : HVI-1305/133
- 1.1.14 Material de la llanta de ensayo / Test rim material : Acero / Steel

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IDIADA Automotive Technology, S.A. N.I.F. A43581610 Servicio Técnico Designado de Homologación (TS)



1.2. Datos de la máquina de ensayo / Test machine data:

1.2.1 Identificación / Identification : AMB-1000RRH

1.2.2 Diámetro de tambor / Drum diameter [mm] : 1.700

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.2.3 Superficie / Surface : Acero liso / Smooth steel

1.2.4 Rugosidad / Roughness [μm] : $\leq 6,3$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3. Datos del ensayo / Test data

1.3.1 Método de medida / Measurement method : Par / Torque

1.3.2 Velocidad de ensayo / Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);
C3: 80 km/h (K:110 km/h y mayor e índices de carga > o igual a 121)

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.3 Índice de carga (LI) / Carga [kg] : 118 / 1.320
Load Index (LI) / Load [kg]

1.3.4 Carga de ensayo / Test load [kg / N] : 1.122 / 11.006,8

C2/C3 (% de carga simple): 85 (*)

(*) como porcentaje de la carga simple de la capacidad máxima de carga para utilización simple especificada en los manuales de normas para neumáticos aplicables si no figura en el neumático.

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.5 Presión de ensayo [kPa] / : 770
Test inflation pressure, initial [kPa]

C2/C3 : que corresponde a la capacidad máxima de carga para utilización simple (*)

(*): presión de inflado marcada en el flanco, o si no se marca en el flanco, como se especifica en los manuales de normas para neumáticos aplicables.

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals.

CUMPLE / NO-CUMPLE

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FULFILS / NOT-FULFILS

1.3.6 Distancia del eje del neumático a la superficie exterior bajo condiciones de estado estacionario / *Distance from the tyre axis to the drum outer surface under steady state conditions* (rL) : N.A.

1.3.7 Temperatura ambiente T_{am} [°C] / *Ambient temperature* T_{am} [°C] : 25,01

$$20,0 \leq T_{am} \leq 30,0$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.8 Carga de parásitas / *Skim test load* [N] : 392,4

$$C3 \leq 500 \text{ N}$$

CUMPLE / NO-CUMPLE
FULFILS / NOT-FULFILS

1.3.9 Par en carga de ensayo (T_t) [Nm] / *Input load torque* (T_t) [Nm] : 98,83

1.3.10 Par en skim test (T_{pl}) [Nm] / *Input skim test torque* (T_{pl}) [Nm] : 39,58

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**2. RESULTADOS DE ENSAYO / TEST RESULTS**

- 2.1. Coeficiente de resistencia a la rodadura /
Rolling resistance coefficient
- 2.1.1 Valor inicial / *Initial value*
(o la media en el caso de más de uno /
or average in the case of more than 1) [N/kN] : 6,34
- 2.1.2 Valor corregido por temperatura / : 6,34
Temperature corrected value [N/kN]
- 2.1.3 Valor corregido por diámetro y temperatura / : 6,19
Temperature and drum diameter
corrected value [N/kN]

Coeficiente de resistencia a rodadura / *Rolling resistance coefficient* Cr [N/kN] = 6,19

- 2.2. Valor límite para neumático de Clase C3 (Etapla 2) / *Limit value for the Class C3 tyre (Stage 2)*: 6,5 N/kN

CUMPLE / ~~NO-CUMPLE~~
FULFILS / ~~NOT-FULFILS~~

Lugar de ensayo / *Place of test*: L'Albornar (Santa Oliva)

Fecha de ensayo / *Date of test*: 22/09/2015

袁柱

Zhu Yuan
HOMOLOGATION ENGINEER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA.
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TECHNICAL DOCUMENTATION

Type of tyre:

LH668



Date : Feb 10. 2023

Ext. : 06

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL
 - 1.1. The performance characteristics to be assessed for the tyre type : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
 - 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
 - 1.3. If applicable, name and address of manufacturer's representative : N.A.
 - 1.4. Brand name(s)/Trademark(s) : JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR
 - 1.5. Trade description(s)/Commercial name(s) : LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300
 - 1.6. Type of tyre : LH668
2. TYRE
 - 2.1. Tyre class : ~~C1/C2/C3~~⁽¹⁾
 - 2.2. Category of use : Normal/~~snow/special~~⁽¹⁾
 - 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~⁽¹⁾
 - 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~⁽¹⁾
 - 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial⁽¹⁾
 - 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
 - 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3
- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

JILUTONG; RICHWAY; ODYKING; TRANSKING, SAFECESS; SUNFULCESS; FIRELION; SUNWIDE; PANJI; YUWANG; FIREMAX; KPATOS; CROWN; HUNTERROAD; ECOSTAR

Trade description(s)/Commercial name(s):

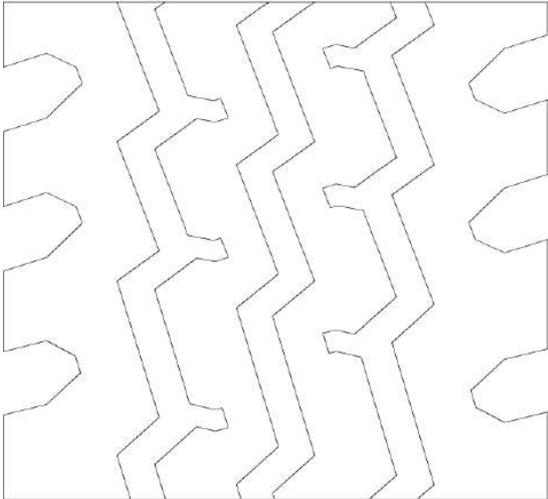
LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.1072	7.00R16LT 118/114L	N.A.	73	0.80	6.5	N.A.
2	E9-00.1071	7.50R16LT 122/118L	N.A.	73	0.80	6.5	N.A.
3	E9-00.1070	8.25R16LT 128/124L	N.A.	73	0.80	6.5	N.A.
4	E9-00.1069	8.25R20 139/137L	N.A.	73	0.80	6.5	N.A.
5	E9-00.1000	9.00R20 144/142L	N.A.	73	0.80	6.5	N.A.
6	E9-00.1001	10.00R20 149/146K	N.A.	73	0.80	6.5	N.A.
7	E9-00.1002	11.00R20 152/149K	N.A.	73	0.80	6.5	N.A.
8	E9-00.1003	12.00R20 154/151K	N.A.	73	0.80	6.5	N.A.
9	E9-00.1068	12.00R20 156/153K	N.A.	73	0.80	6.5	N.A.
10	<u>E9-00.6533</u>	<u>12.00R20 156/153K</u>	<u>N.A.</u>	<u>73</u>	<u>0.80</u>	<u>6.5</u>	<u>N.A.</u>
11	E9-00.1004	12.00R24 160/157K	N.A.	73	0.80	6.5	N.A.
12	E9-00.1005	11R22.5 146/143L	N.A.	73	0.80	6.5	N.A.
13	E9-00.1102	11R22.5 146/143M	N.A.	73	0.80	6.5	N.A.
14	E9-00.6171	11R22.5 149/146L	N.A.	73	0.80	6.5	N.A.
15	E9-00.1006	12R22.5 152/149L	N.A.	73	0.80	6.5	N.A.
16	E9-00.1251	13R22.5 154/151L	N.A.	73	0.80	6.5	N.A.
17	E9-00.1204	13R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
18	E9-00.1067	315/80R22.5 156/153L	N.A.	73	0.80	6.5	N.A.
19							
20							

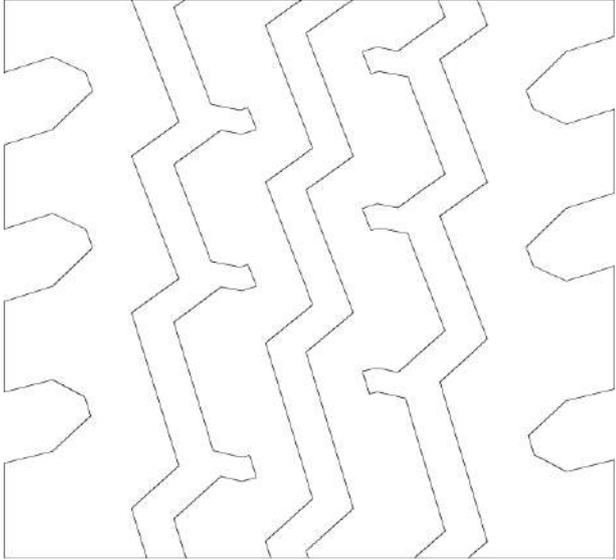
Worst Case Selection

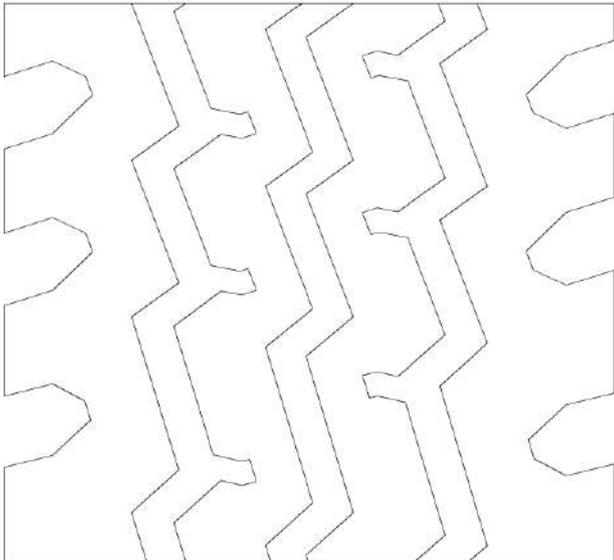
Test size for rolling sound	:	13R22.5 156/153L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	9.00R20 144/142L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.88 < 1.20$ (Wet grip test result)
Test size for rolling resistance	:	7.00R16LT 118/114L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 13R22.5 156/153L
Market	: EU
Pitch number	: 49
Pitch ratio (Max/Min)	: 1.2441
Groove area ratio [%]	: 31.5 %
Width: main grooves [mm]	: 14
Depth: center groove [mm]	: 14.3
Depth: shoulder groove [mm]	: 15.3
Tyre tread pattern	

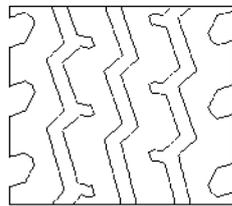
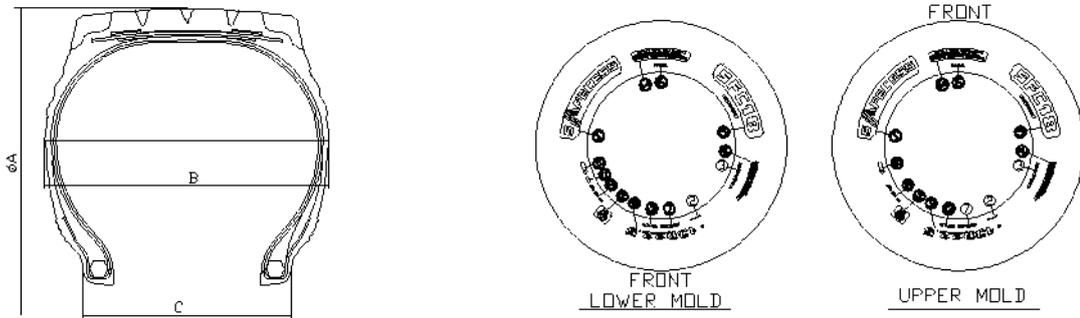
Drawing of the tread pattern
(for measured tyre using for tyre wet grip performance)

Manufacturer name	:	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	:	LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	:	9.00R20 144/142L
Market	:	EU
Pitch number	:	53
Pitch ratio (Max/Min)	:	1.2489
Groove area ratio [%]	:	31.5 %
Width: main grooves [mm]	:	11.3
Depth: center groove [mm]	:	14.5
Depth: shoulder groove [mm]	:	15.5
Tyre tread pattern		

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: LH668; RW300; OD901; TG118; SFC18; FL18; S668; PJ668; YW668; FM18; KTA01; CT101; CL101; H701; ECO18; SMX300;
Tyre Size	: 7.00R16LT 118/114L
Market	: EU
Pitch number	: 51
Pitch ratio (Max/Min)	: 1.2146
Groove area ratio [%]	: 32 %
Width: main grooves [mm]	: 9.0
Depth: center groove [mm]	: 11.0
Depth: shoulder groove [mm]	: 12.0
Tyre mass [kg]	21.5
Tread depth [mm]	11.0
Tread width [mm]	145
Curvature radius of tread crown [mm]	436
Tyre outer diameter[mm]	769
Tread plies	4 PLYES STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise performance)

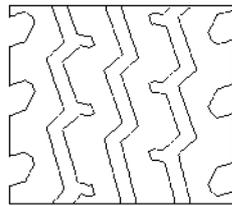
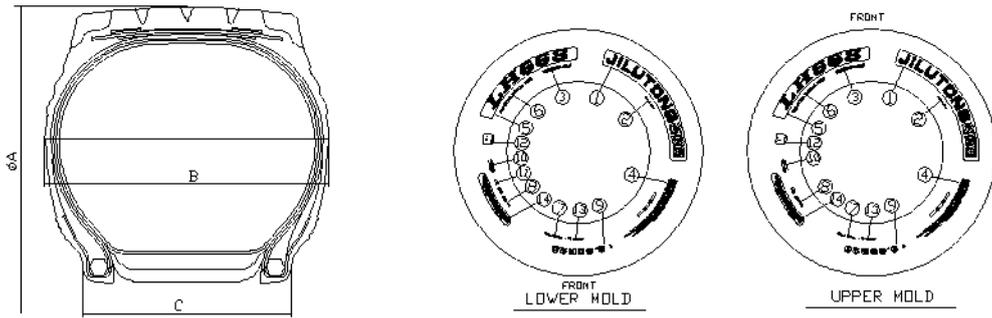


LH668, RW300, DD901, TG118
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECD18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 4000kg (8800 LBS) AT 350 kpa (123 PSI) COLD MAX LOAD DUAL 3600kg (7900 LBS) AT 350 kpa (123 PSI) COLD
13	STANDARD RIM 9.75
12	3C F000381
11	DATE CODE XXXX
10	Ⓢ XXXXXX
9	13R22.5 156/153L
8	DOT XXXX XXXX
7	TUBE LESS
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING:
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

13R22.5 20PR	JILUTONG, RICHWAY, DDIYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KFAOTOS CROWN, CROWN, HUNTERROAD ECDSTAR	LH668, RW300, DD901 TG118, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECD18, SMX300	156/153	L	T/L	1124	320	260	15.3
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY	CHECKED BY	DRAWN BY	WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD						

Drawings of the sidewall (for measured tyre using for tyre wet grip performance)

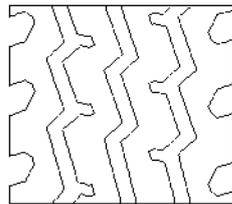
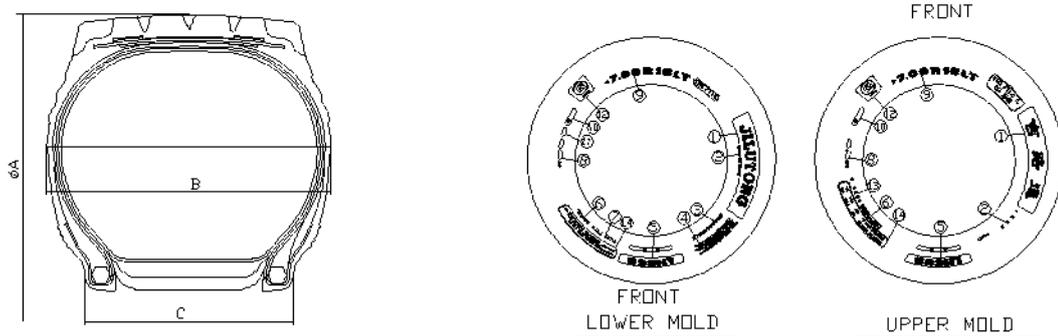


LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 2300kg (5075 LBS) AT 300 kpa (130 PSI) COLD MAX LOAD DUAL 2690kg (5940 LBS) AT 300 kpa (130 PSI) COLD
13	STANDARD RIM 7.0
12	3C F000381
11	DATE CODE XXXX
10	XXXXXX
9	9.00R20 144/142L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

9.00R20 16PR	JILUTONG, RICHWAY, OBYKING TRANSKING, SAFECESS, SUNFULCESS FJRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	144/142	L	T/T	1018	258	190	15.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUZHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			

Drawings of the sidewall
(for measured tyre using for tyre rolling resistance performance)



LH668, RW300, DD901, TGL18
SFC18, FL18, S668, PJ668
YW668, FM18, KTA01, CT101
CL101, H701, ECC18, SMX300

14	PLIES: SIDEWALL 1 STEEL; TREAD 1 STEEL+3STEEL MAX LOAD SINGLE 1320kg (2910 LBS) AT 770 kpa (110 PSI) COLD MAX LOAD DUAL 1180kg (2600 LBS) AT 770 kpa (110 PSI) COLD
13	STANDARD RIM 5.50F
12	3CF000381
11	DATE CODE XXXX
10	XXXXXX
9	7.00R16LT 118/114L
8	DOT XXXX XXXX
7	TUBE TYPE
6	ALL STEEL RADIAL TIRE
5	TREAD PATTERNS
4	SAFETY WARNING
3	REGROOVABLE
2	MADE IN CHINA
1	BRAND NAME

7.00R16LT 14PR	JILUTONG, RICHWAY, DDYKING TRANSKING, SAFECESS, SUNFULCESS FIRELION, SUNWIDE, PANJI YUWANG, FIREMAX, KPATOS CROWN, CROWN, HUNTERROAD ECCSTAR	LH668, RW300, DD901 TGL18, SFC18, SFC18 FL18, S668, PJ668 YW668, FM18, KTA01 CT101, CL101, H701 ECC18, SMX300	118/114	L	T/T	778	202	150	12.0
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO.,LTD			



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Relativa a / Concerning:

- homologación de tipo / *APPROVAL GRANTED* ⁽²⁾
- extensión de homologación de tipo / *APPROVAL EXTENDED* ⁽²⁾
- denegación de homologación de tipo / *APPROVAL REFUSED* ⁽²⁾
- retirada de homologación de tipo / *APPROVAL WITHDRAWN* ⁽²⁾
- producción definitivamente abandonada / *production definitively discontinued* ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1419*00**

Nº de extensión / *Extension No.*: **00**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : N/A

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : Si / Yes |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : FM985 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : FIREMAX; KPATOS; SUNWIDE
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : FM985; KT985; SDR560
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (~~fase 1~~/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (~~fase 1~~/fase 2) ⁽²⁾ / Performances approved: sound level at (~~stage 1~~/stage 2), wet adhesion level, rolling resistance level (~~stage 1~~/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 75 dB(A) a la velocidad de referencia de 70/~~80~~ km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 75 dB(A) at reference speed of 70/~~80~~ km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.11 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.11 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 5.809 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6 5.809 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el ~~método de frenado sobre nieve, método de tracción giratoria o método de aceleración~~ ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the ~~brake-on-snow method, spin traction method or acceleration method~~ ⁽²⁾
- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el ~~método de frenado sobre nieve~~ / Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the ~~brake-on-ice method~~. ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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9. Número de informe emitido por el Servicio Técnico / : CN23020173
Number of report issued by the Technical Service
10. Fecha del informe emitido por este Servicio / : 28/04/2023
Date of report issued by that service
11. Motivo(s) de la extensión (en su caso) / : N/A
Reason(s) of extension (if applicable)
12. Observaciones / : N/A
Any remarks
13. Lugar / : Madrid
Place
14. Fecha/ : Ver firma electrónica /
Date See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request* ⁽⁵⁾
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





INFORME/REPORT N° CN23020173

REGLAMENTO UN N° 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA, ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA UN REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET SURFACES AND ROLLING RESISTANCE

Solicitante / Applicant	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / Manufacturer	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / Tyre Class	: C3
Categoría de uso / Category of use	: Nieve / Snow
Neumático de tracción / Traction tyre	: Sí / Yes
Designación de tipo de neumático / Tyre type designation	: FM985
Marca / Brand name	: FIREMAX; KPATOS; SUNWIDE
Nombre comercial / Commercial name	: FM985; KT985; SDR560
Lugar y fecha de emisión del informe / Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 28/04/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO UN N° 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, El procedimiento de ensayo para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to Reglamento UN N° 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.

Realizado por / Performed by:

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Zhu Yuan
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V.B° / Revised by:

Josep Masip Gomez
JEFE DE DEPARTAMENTO
DEPARTMENT MANAGER



INFORME/REPORT Nº CN23020173

RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 12.00R20 156/153K (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CN23030970, IDIADA, 17/03/2023
See Annex 1, Test report CN23030970, IDIADA, 17/03/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 12.00R20 156/153K (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN23030971, IDIADA, 22/03/2023
See Annex 2, Test report CN23030971, IDIADA, 22/03/2023
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 12.00R20 156/153K (menor índice de carga / *lowest load index*)
Ver Anexo 3, Informe CN23031599, IDIADA, 10/03/2023
See Annex 3, Test report CN23031599, IDIADA, 10/03/2023
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
- N/A
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 / *Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 28/04/2023



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* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*
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ANNEX 1 TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23030970

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer ⁽¹⁾	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Snow
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: Yes
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM985
1.1.9	Tyre size	: 12.00R20 156/153K
1.1.10	Load index / Corresponding mass Q _r [kg]	: 156 / 4,000
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 0523, 2TWTDTA12
1.1.13	Reference inflation pressure P _r [kPa]	: 900

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

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1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$648.11 \leq 650.00 \leq 712.92$
Front axle right wheel	$630.78 \leq 640.00 \leq 693.85$
Rear axle left wheel	$626.07 \leq 630.00 \leq 688.67$
Rear axle right wheel	$641.27 \leq 650.00 \leq 705.40$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2303/00682-01	CN-2303/00682-02

Rear left	Rear right
CN-2303/00682-03	CN-2303/00682-04

1.1.16 Test rim : 8.50 x 20

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02759-01	CN-1912/02759-02

Rear left	Rear right
CN-1912/02759-03	CN-1912/02759-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	3,076	$50 < 76.90 < 90$
Front axle right wheel	3,010	$50 < 75.25 < 90$
Rear axle left wheel	2,992	$50 < 74.80 < 90$
Rear axle right wheel	3,050	$50 < 76.25 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 75.80 \leq 80$

FULFILS / NOT FULFILS

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1.2. Test vehicle

- 1.2.1 Trade name : HYUNDAI
- 1.2.2 Model : XCIENT
- 1.2.3 Year : 2019
- 1.2.4 Transmission : Manual
- 1.2.5 Wheelbase [mm] : 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

- 1.2.6 Vehicle internal reference : CN-2001/01800

1.3. Test equipment

- 1.3.1 Sound level meter 1 : 193663
- 1.3.2 Sound level meter 2 : 193664
- 1.3.3 Manometer : 27230
- 1.3.4 Weight scale : SCS-5 / SCS-10
- 1.3.5 Track temperature measurement device : 182330
- 1.3.6 Wind speed measurement device : 193666
- 1.3.7 Speed measurement device : 170358
- 1.3.8 Ambient temperature measurement device : 193659

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2. TEST TRACK

2.1. Environment

2.1.1 Air temperature T_a [°C] : 13.2
 $5.0 < T_a < 40.0$

FULFILS / NOT FULFILS

2.1.2. Test surface temperature T_s [°C] : 8.0
 $5.0 \leq T_s \leq 50.0$

FULFILS / NOT FULFILS

2.1.3 Wind speed [m/s] : 2.0
 Less than 5 m/s

FULFILS / NOT FULFILS

2.1.4 Ambient noise [dB(A)] : 40.8
 Test result – Ambient noise ≥ 10 dB(A)

FULFILS / NOT FULFILS

2.1.5 Wind direction [°] : 231.0

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 6th 2023
- Issued by : IDIADA

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3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	61.7	S → N	74.4	74.3	12.3	6.9	74.4	74.3
2	64.0	S → N	74.9	75.0	12.4	7.0	74.9	75.0
3	65.8	S → N	75.3	75.7	12.7	7.9	75.3	75.7
4	67.9	S → N	76.1	77.1	13.1	8.0	76.1	77.1
5	71.8	S → N	76.7	77.2	13.4	8.3	76.7	77.2
6	73.3	S → N	77.8	78.0	13.9	8.4	77.8	78.0
7	76.3	S → N	78.7	78.4	13.8	8.5	78.7	78.4
8	77.9	S → N	79.5	80.0	14.3	9.3	79.5	80.0

- 3.1. Regression line slope : 49.77
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 76.9
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 75
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77

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4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 17/03/2023

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ANNEX 2 TO THE TEST REPORT
ADHESION ON WET SURFACES, REPORT No. CN23030971

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant ⁽¹⁾ : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
- 1.1.2 Manufacturer ⁽¹⁾ : WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD.
Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.1.3 Tyre class : C3
- 1.1.4 Category of use : Snow
- 1.1.5 Tyre for use in severe snow conditions : No
- 1.1.6 Traction tyre : Yes
- 1.1.7 Brand name / Trade mark : FIREMAX
- 1.1.8 Trade description / Commercial name : FM985
- 1.1.9 Tyre size : 12.00R20 156/153K
- 1.1.10 Load index / Corresponding mass Q_r [kg] : 156 / 4,000
- 1.1.11 Tyre structure : Radial
- 1.1.12 Date code, other manufacturer markings : 0523, 2TWTDTA12
- 1.1.13 Reference inflation pressure [kPa] : 900

⁽¹⁾ Information provided by the client. The laboratory is not responsible for such information



1.1.14 Test tyre internal reference :

Front left	Front right
CN-2303/00682-01	CN-2303/00682-02
Rear left	Rear right
CN-2303/00682-03	CN-2303/00682-04

1.1.15 Test rim : 8.50 x 20

1.1.16 Test rim internal reference :

Front left	Front right
CN-1912/02759-01	CN-1912/02759-02
Rear left	Rear right
CN-1912/02759-03	CN-1912/02759-04

1.1.17 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.18 SRTT internal reference :

Front left	Front right
CN-2204/01872-01	CN-2204/01872-02
Rear left	Rear right
CN-2204/01872-03	CN-2204/01872-04

1.1.19 Test SRTT rim : 9.00 x 22.5

1.1.20 Test SRTT rim internal reference :

Front left	Front right
CN-1912/02743-01	CN-1912/02743-02
Rear left	Rear right
CN-1912/02743-03	CN-1912/02743-04

1.1.21 Test tyre load [kg] :

SRTT 1			Candidate tyre			SRTT 2		
FL	2,858	76.2% Qr	FL	2,924	73.1% Qr	FL	2,870	76.5% Qr
FR	2,780	74.1% Qr	FR	2,826	70.7% Qr	FR	2,760	73.6% Qr
RL	2,710	72.3% Qr	RL	2,728	68.2% Qr	RL	2,704	72.1% Qr
RR	2,718	72.5% Qr	RR	2,740	68.5% Qr	RR	2,712	72.3% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

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1.2. Test vehicle

- 1.2.1 Trade name : HYUNDAI
- 1.2.2 Model : XCIENT
- 1.2.3 Year : 2019
- 1.2.4 Transmission : Manual
- 1.2.5 Wheelbase [mm] : 3,560
- 1.2.6 Vehicle internal reference : CN-2001/01800
- 1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

1.3. Test inflation pressure

1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	641	630	630	630
SRTT 2	644	630	630	630

1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	2,924	4,000	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	1	630
FR	2,826	4,000		1	630
RL	2,728	4,000	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	1	630
RR	2,740	4,000		1	630

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1.4. Test equipment

- 1.4.1 Manometer : 27230
- 1.4.2 Weight scale : SCS-5/ SCS-10
- 1.4.3 Thermometer : 182330
- 1.4.4 Track temperature measurement device : 182329
- 1.4.5 Speed measurement device : VBOX Sport 07013178
- 1.5.6 Brake system pressure transducer : 19-2039-07

2. TEST TRACK

- 2.1. Location : Straight line braking B, ICPG
- 2.2. Date of check on compliance of the test surface : April 1st 2022
- 2.3. Test track characteristics:
 - 2.3.1 Texture depth [mm] : 0.86
 - 2.3.2 PBC : 0.71 and 0.72
 - 2.3.3 Water depth [mm] : Average of 1.18
- 2.4. Test method : Vehicle
- 2.5. Air temperature T_a [°C] : 19.4
- 2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT 1	Candidate tyre	SRTT 2
10.6	13.2	14.5

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS



3. TEST RESULTS

Test run	SRTT 1		Candidate tyre		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	29.42	4.20	26.29	4.70	29.16	4.23
2	29.66	4.16	26.07	4.74	29.34	4.21
3	29.07	4.25	26.72	4.62	29.48	4.19
4	-	-	26.79	4.61	-	-
5	-	-	26.70	4.62	-	-
6	-	-	26.21	4.71	-	-

Coefficient of variation

SRTT 1	Candidate tyre	SRTT 2
1.01	1.17	0.55
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	S - N	315/70R22.5	---	4.20 m/s ²	---	> 600
2	60 - 20	S - N	---	12.00R20	4.67 m/s ²	1.11	> 600
5	60 - 20	S - N	315/70R22.5	---	4.21 m/s ²	---	> 600

Wet grip index G = 1.11

3.1. Limit value

Category of use	Wet Grip Index (+10% Wet Grip Index) (G)			
	C2		C3	
	Other	Traction	Other	Traction
Normal	≥ 0.95 (≥ 1.05)	≥ 0.85 (≥ 0.94)	≥ 0.80 (≥ 0.88)	≥ 0.65 (≥ 0.72)
Snow			≥ 0.65 (≥ 0.72)	
Snow in severe conditions	≥ 0.85 (≥ 0.94)	≥ 0.85 (≥ 0.94)	≥ 0.65 (≥ 0.72)	≥ 0.65 (≥ 0.72)
Special			≥ 0.65 (≥ 0.72)	



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 22/03/2023

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ANNEX 3 TO THE TEST REPORT
ROLLING RESISTANCE, REPORT N° CN23031599

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant ⁽¹⁾ : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
 Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiuahuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
- 1.1.2 Manufacturer ⁽¹⁾ : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
 (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.3 Tyre class : C3
- 1.1.4 Category of use : Snow
- 1.1.5 Tyre for use in severe snow conditions : No
- 1.1.6 Traction tyre : Yes
- 1.1.7 Brand name / Trade mark : FIREMAX
- 1.1.8 Trade description / Commercial name : FM985
- 1.1.9 Tyre size : 12.00R20 156/153K
- 1.1.10 Load index / Corresponding mass Q_r [kg] : 156 / 4,000
- 1.1.11 Tyre structure : Radial
- 1.1.12 Date code, other manufacturer markings : 0523
- 1.1.13 Inflation pressure [kPa] : 900
- 1.1.14 Test tyre internal reference : CN23031599
- 1.1.15 Test rim : 8.50 x 20
- 1.1.16 Test rim internal reference : 8.50 x 20
- 1.1.17 Test rim material : Steel

(1) Information provided by the client. The laboratory is not responsible for such information

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1.2. Test machine data

1.2.1 Identification : 04-1086, 04-807

1.2.2 Drum diameter [mm] : 1,707.6

~~FULFILS/NOT FULFILS~~

1.2.3 Surface : Smooth steel

1.2.4 Roughness [μm] : ≤ 6.3

~~FULFILS/NOT FULFILS~~

1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);

~~FULFILS/NOT FULFILS~~

1.3.3 Load Index (LI) / Load [kg] : 156 / 4,000

1.3.4 Test load [kg / N] : 3,400 / 33,343

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load, or 85 per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre.

~~FULFILS/NOT FULFILS~~

1.3.5 Test inflation pressure, initial [kPa] : 900

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals corresponding to maximum load capacity for single application.

~~FULFILS/NOT FULFILS~~

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.528

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.560

1.3.8 Ambient temperature T_{am} [°C] : 24.89

$20.0 \leq T_{am} \leq 30.0$

~~FULFILS/NOT FULFILS~~

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1.3.9 Skim test load [N] : 399.925

C3 ≤ 500 N

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 131.274

1.3.11 Spindle force during skim test (Ft) [N] : 7.673

1.3.12 Parasitic loss (Fpl) [N] : 12.701

1.3.13 Rolling resistance (Fr) [N] : 199.693

2. TEST RESULTS

2.1. Rolling resistance coefficient

2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.989

2.1.2 Temperature corrected value [N/kN] : 5.985

2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.809

Rolling resistance coefficient Cr [N/kN] = 5.809

2.2. Limit value [N/kN]

	Stage 1	Stage 2
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

For "snow tyre for use in severe snow conditions", the limits shall be increased by 1 N/kN.

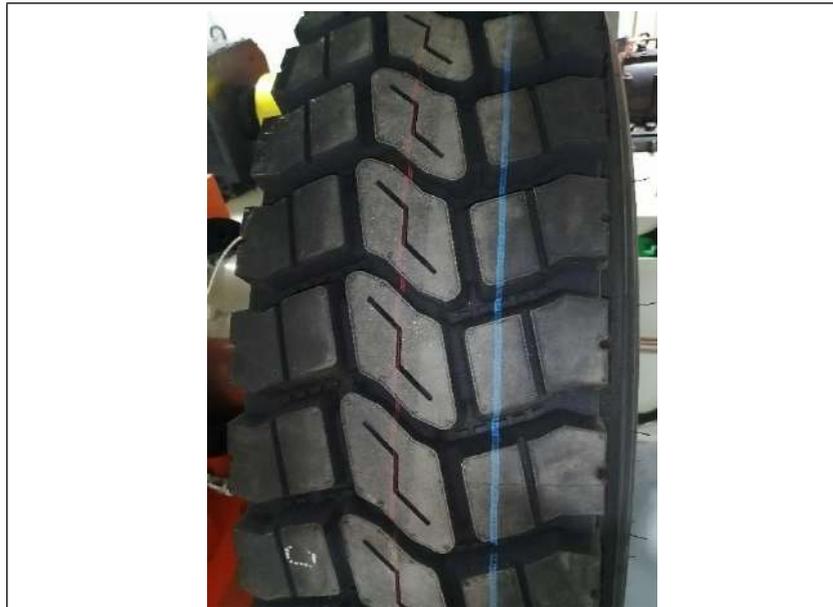
* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Qingdao Product Quality Testing Research Institute (Qingdao, China)

Date of test: 10/03/2023

袁柱

Zhu Yuan
INGENIERO DE HOMOLOGACIONES
HOMOLOGATION ENGINEER

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
* THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
* MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY
* THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

DOCUMENTACIÓN TÉCNICA /
TECHNICAL DOCUMENTATION

Type of tyre:
FM985



Date : Apr. 04.2023
Ext. : 00

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

GENERAL

1

- 1.1. The performance characteristics to be assessed for the tyre type: : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
- 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.3. If applicable, name and address of manufacturer's representative : N.A.
- 1.4. Brand name(s)/Trademark(s) : FIREMAX; KPATOS; SUNWIDE
- 1.5. Trade description(s)/Commercial name(s) : FM985; KT985; SDR560
- 1.6. Type of tyre : FM985
2. TYRE
- 2.1. Tyre class : ~~C1/C2/C3~~ ⁽¹⁾
- 2.2. Category of use : ~~Normal/snow/special~~ ⁽¹⁾
- 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~ ⁽¹⁾
- 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~ ⁽¹⁾
- 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial ⁽¹⁾
- 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1
3. The application for approval shall be accompanied (in triplicate) by
- 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the tread pattern shall be supplied in order to allow verification of the void-to-fill ratio. : N.A.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):

FIREMAX; KPATOS; SUNWIDE

Trade description(s)/Commercial name(s):

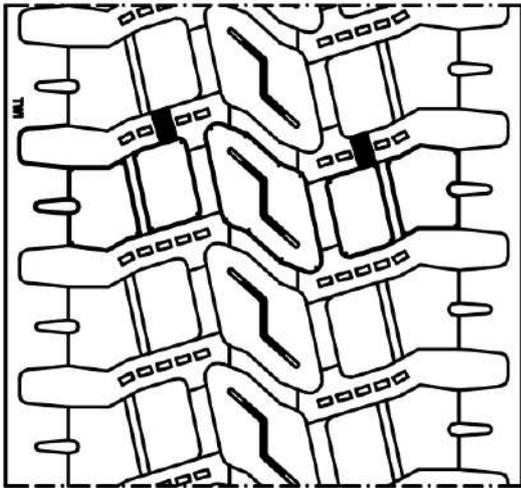
FM985; KT985; SDR560

	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-00.6534	12.00R20 156/153K	N.A.	75	0.65	6.5	N.A.

Worst Case Selection

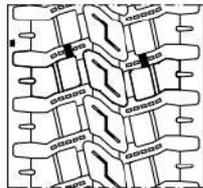
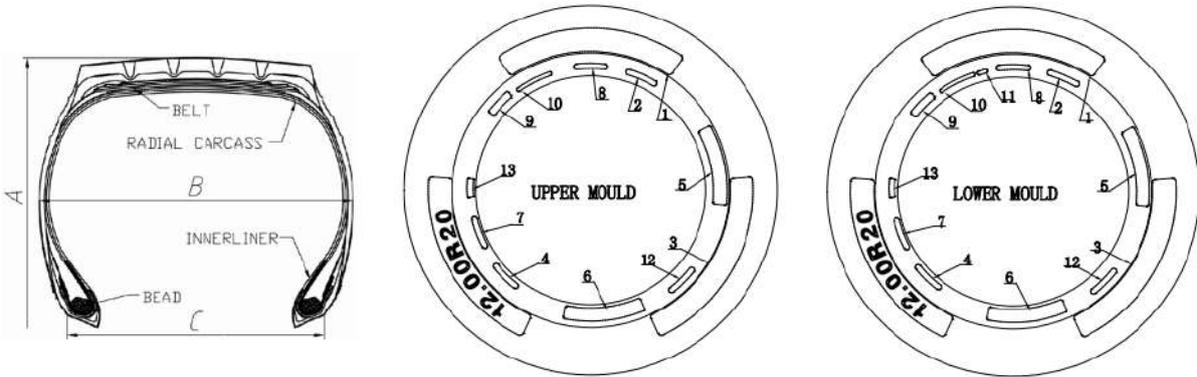
Test size for rolling sound	:	12.00R20 156/153K
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	12.00R20 156/153K
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.715 < 1.11$ (Wet grip test result)
Test size for rolling resistance	:	12.00R20 156/153K
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3[#]N/kN) - 0.06* x (LI candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: FM985; KT985; SDR560
Tyre Size	: 12.00R20 156/153K
Market	: EU
Pitch number	: 48
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 34%
Width: main grooves [mm]	: 18.5
Depth: center groove [mm]	: 18.5
Depth: shoulder groove [mm]	: 18.5
Tyre mass [kg]	70.8
Tread depth [mm]	18.5
Tread width [mm]	235
Curvature radius of tread crown [mm]	698
Tyre outer diameter[mm]	1115
Tread plies	1 STEEL + 4 STEEL
Tyre tread pattern	 <p style="text-align: center;">Block number: 48</p>

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)



FM985;KT985;SDR560

Block number: 48

1	FIREMAX, KPATOS, SUNWIDE
2	12.00R20 156/153K
3	FM985;KT985, SDR560
4	STANDARD RIM 8.5
5	LOAD RANGE L 20PR MAX. LOAD SINGLE 4000 kg (8820 lbs) AT 900 KPa (130 psi) COLD MAX. LOAD DUAL 3650 kg (8050 lbs) AT 900 KPa (130 psi) COLD PLIES: SIDEWALL 1 STEEL TREAD 1 STEEL +4 STEEL
6	SAFETY WARNING:
7	TUBETYPE RADIAL
8	MADE IN CHINA
9	® 00**** (ECE APPROVAL MARK AND NUMBER)
10	DOT 2TW TDTA12
11	DATE CODE ****
12	REGROOVABLE
13	TRACTION M+S

12.00R20	FIREMAX KPATOS SUNWIDE	FM985 KT985 SDR560	156/153	K	T/T	1122	313	215.9	18.5
TIRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A (mm)	B (mm)	C (mm)	SKID DEPTH (mm)
APPROVED BY		CHECKED BY		DRAWN BY	WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO, LTD.				



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Relativa a / Concerning:

- homologación de tipo / *APPROVAL GRANTED* ⁽²⁾
- extensión de homologación de tipo / *APPROVAL EXTENDED* ⁽²⁾
- denegación de homologación de tipo / *APPROVAL REFUSED* ⁽²⁾
- retirada de homologación de tipo / *APPROVAL WITHDRAWN* ⁽²⁾
- producción definitivamente abandonada / *production definitively discontinued* ⁽²⁾

de un tipo de neumático en lo que se refiere al “nivel de emisión de ruido de rodadura” y/o a la “adherencia en superficie mojada” y/o a la “resistencia a la rodadura”, en virtud al Reglamento No 117. / *of a type of tyre with regard to “rolling sound emission level” and/or adhesion on wet surfaces” and/or “rolling resistance” pursuant to Regulation No. 117.*

Número de homologación de tipo / *Approval No* ⁽³⁾: **E9*117R02/14*1420*00**

Nº de extensión / *Extension No.*: **00**

Sufijos / *Suffixes* ⁽⁴⁾: **02S2WR2**

Motivos de la extensión / *Reason for extension*: Ver informe N° / *See test report No.* : N/A

- | | | |
|-------|--|---|
| 1. | Nombre y dirección del fabricante /
<i>Manufacturer's name and address</i> | : WEIFANG SHUNFUCHANG RUBBER AND
PLASTIC PRODUCTS CO., LTD.
(Northeast Corner, Crossing of Xihuan Road and
Jinguang Street), Chenming Industrial District,
Shouguang 262719, Weifang, SHANDONG
(CHINA) |
| 2. | Nombre y dirección del representante del fabricante /
<i>Manufacturer's representative name and address</i> | : N/A |
| 3. | Clase de neumático /
<i>Tyre Class</i> | : C3 |
| 4. | Categoría de uso del tipo de neumático /
<i>Category of use of the type of tyre</i> | : normal / nieve / especial ⁽²⁾
normal / snow / special ⁽²⁾ |
| 4.1. | Neumático de nieve para uso en condiciones severas /
<i>Snow tyre for use in severe snow conditions</i> | : No / No |
| 4.1.1 | Ice grip tyre | : No / No |
| 4.2. | Neumático de tracción / <i>Traction tyre</i> | : No / No |
| 5. | Estructura del neumático / <i>Tyre structure</i> | : Radial |
| 6. | Designación de tipo de neumático / <i>Type of tyre designation</i> | : FM900 |

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de “neumático de nieve para uso en condiciones severas” se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of “snow tyre for use in severe snow conditions” a test report according to Appendix 2 to Annex 7 shall be submitted*





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- 6.1. Marca(s) /Brand name(s)/Trademark(s) : FIREMAX; KPATOS
- 6.2. Denominación(es) comercial(es)/ Trade description(s)/commercial name(s) of the type of tyre : FM900; KT900
7. Servicio técnico autorizado a efectos de homologación o comprobación de los ensayos de conformidad/ Technical service approved for purposes of approval or of verification of conformity tests : IDIADA
8. Prestaciones homologadas: nivel de ruido en (~~fase 1~~/fase 2), nivel de adherencia en superficie mojada, nivel de resistencia a la rodadura (~~fase 1~~/fase 2) ⁽²⁾ / Performances approved: sound level at (~~stage 1~~/stage 2), wet adhesion level, rolling resistance level (~~stage 1~~/stage 2) ⁽²⁾
- 8.1. Nivel de emisión de ruido de la medida representativa de neumático, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 3: 71 dB(A) a la velocidad de referencia de 70/~~80~~ km/h ⁽²⁾ / Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 71 dB(A) at reference speed of 70/~~80~~ km/h ⁽²⁾
- 8.2. Nivel de adherencia en superficie mojada de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo del apéndice al Anexo 5: 1.10 (G) mediante el método de vehículo ~~o de remolque~~ ⁽²⁾ / Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in the appendix to Annex 5: 1.10 (G) using the vehicle ~~or trailer~~ ⁽²⁾ method
- 8.3. Nivel de resistencia a la rodadura de la medida representativa de neumático, ver párrafo 2.7. de este Reglamento, de acuerdo al punto 7. del informe de ensayo en el Apéndice 1 del Anexo 6: 4.884 N/kN / Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6 4.884 N/kN
- 8.4. Nivel de desempeño sobre nieve de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 3 del Anexo 7: N/A (índice de adherencia en nieve) usando el ~~método de frenado sobre nieve, método de tracción giratoria o método de aceleración~~ ⁽²⁾ / Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 3 to Annex 7: N/A (snow grip index) using the ~~brake-on-snow method, spin traction method or acceleration method~~ ⁽²⁾
- 8.4.1. Nivel de desempeño sobre hielo de la medida representativa de neumático, ver párrafo 2.7. del Reglamento Num. 117, de acuerdo al punto 7. del informe de ensayo en el apéndice 2 del Anexo 8: N/A (índice de adherencia en hielo) usando el ~~método de frenado sobre nieve~~ / Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: N/A (ice grip index) using the ~~brake-on-ice method~~. ⁽²⁾

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

⁽²⁾ Táchese lo que no proceda / Strike out what does not apply

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted





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9. Número de informe emitido por el Servicio Técnico / : CN23020174
Number of report issued by the Technical Service
10. Fecha del informe emitido por este Servicio / : 28/04/2023
Date of report issued by that service
11. Motivo(s) de la extensión (en su caso) / : N/A
Reason(s) of extension (if applicable)
12. Observaciones / : N/A
Any remarks
13. Lugar / : Madrid
Place
14. Fecha/ : Ver firma electrónica /
Date See electronic signature
15. Firma / Signature: EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. del DIRECTOR GENERAL DE INDUSTRIA Y DE LA PYME de 25-10-2012
16. Se adjunta a la presente notificación / *Annexed to this communication are:*
- 16.1 La lista de documentos que figuran en el expediente de homologación depositado en la Autoridad de homologación de Tipo y que podrá obtenerse previa petición ⁽⁵⁾ / *A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽⁵⁾*
- 16.2 Una lista de designaciones de las medidas de neumático: se especifica para cada marca y/o cada descripción comercial la lista de medidas de neumático, añadiendo para los neumáticos de clase C1 si son "Reinforced" o "Extra Load" o no. / *A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and Service descriptions, adding in case of class C1 tyres whether "reinforced" (or "extra load") or not.*

⁽¹⁾ Distinguiendo el número del país que ha otorgado/extendido/rechazado/retirado la homologación (ver disposiciones de homologación en el Reglamento) / *Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).*

⁽²⁾ Táchese lo que no proceda / *Strike out what does not apply*

⁽³⁾ De acuerdo al Calendario 4 de la Revisión 3 del acuerdo de 1958. / *According to Schedule 4 to Revision 3 of the 1958 Agreement.*

⁽⁴⁾ De acuerdo a los párrafos 5.2.2. y 5.3.1.2 de este Reglamento / *According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.*

⁽⁵⁾ Apéndice 2 para neumáticos clase C1 y C2, Apéndice 3 para neumáticos clase C3. / *Appendix 2 for classes C1 and C2 tyres, Appendix 3 for class C3 tyres.*

⁽⁶⁾ En el caso de "neumático de nieve para uso en condiciones severas" se deberá añadir un informe de ensayo de acuerdo al Apéndice 2 del Anexo 7. / *In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted*





Anexo - Información adicional sobre esta Homologación de tipo

Condiciones de la autorización y pie de recurso

Los vehículos, sistemas, componentes o unidades técnicas independientes fabricados en virtud de esta homologación de tipo deben estar identificados y portar las marcas correspondientes según la reglamentación aplicable.

La producción en serie de vehículos, sistemas, componentes y unidades técnicas independientes debe realizarse de acuerdo con la documentación de homologación. Todo cambio en la producción individualizada requerirá autorización expresa previa por parte de la Autoridad de Homologación Española.

Cualquier modificación en los datos incluidos en el certificado de homologación, como el nombre de la empresa, representante en la UE, dirección y las plantas de fabricación deben ser comunicados inmediatamente a la Autoridad de Homologación Española.

La homologación perderá su validez cuando la misma haya sido retirada o el tipo ya no cumpla con los requisitos legales. La retirada tendrá lugar siempre que hayan dejado de cumplirse los requisitos necesarios para la concesión y mantenimiento de la misma, cuando el fabricante no pueda demostrar a la Autoridad de Homologación el cumplimiento con los requisitos y procedimientos para garantizar la conformidad de la producción, en caso de que el titular no cumpla con sus obligaciones inherentes a la homologación o cuando se determine que el tipo homologado no cumple con los requisitos de seguridad y medio ambiente.

La Autoridad de Homologación de Tipo española podrá verificar el cumplimiento de las obligaciones del fabricante en cualquier momento. En particular, se podrá comprobar la correspondencia del producto con el tipo homologado, así como las medidas establecidas para garantizar la conformidad de la producción. A tal efecto se podrán tomar o solicitar las muestras necesarias. Se permitirá el acceso sin trabas a las instalaciones de producción y almacenamiento a los empleados o representantes de la Autoridad de Homologación Española.

La autorización objeto de esta resolución de homologación de tipo no es transferible. Los derechos de marca de terceros no se encuentran afectados por esta homologación.

Contra la presente Resolución, que no pone fin a la vía administrativa, podrá interponerse recurso de alzada ¹ ante la Dirección General de Industria y de la Pequeña y Mediana empresa, o ante la Secretaría General de Industria y de la Pequeña y Mediana empresa, en el plazo de un mes a partir del día siguiente a su notificación, de conformidad con los artículos 121 y 122 de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

¹ Nota: Para interponer recurso de alzada deberá acceder al siguiente enlace:
<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>





Annex - Additional Information on this Type Approval

Collateral clauses and right to appeal (Courtesy translation)

All vehicles, systems, components or separate technical units which correspond to the approved type are to be identified and marked according to the applied regulation.

The serial fabrication of vehicles, systems, components or separate technical must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the Spanish Type Approval Authority.

Changes in the data included in the approval certificate, such as the name of the company, EU representative, address and the manufacturing plant are to be immediately disclosed to the Spanish Type Approval Authority.

The approval expires if it is withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the manufacturer cannot demonstrate to the Type Approval Authority that it comply with the requirements and procedures to guarantee the conformity of production, if the holder of the approval violates the duties involved in the approval or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

The Spanish Type Approval Authority may check the proper exercise of the conferred authority taken from this approval at any time. In particular, this means the compliant production as well as the measures for conformity of production. For this purpose, samples can be taken or have taken. The employees or the representatives of the Spanish Type Approval Authority may get unhindered access to the production and storage facilities.

The authorization contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

This approval does not conclude the administrative channel and can be appealed² within one month after notification, according to articles 121 and 122 of Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas. The appeal is to be addressed to Dirección General de Industria y de la Pequeña y Mediana empresa, or Secretaría General de Industria y de la Pequeña y Mediana empresa.

² Note: Appeal on the following link:

<https://sede.serviciosmin.gob.es/es-es/procedimientoselectronicos/Paginas/detalle-procedimientos.aspx?IdProcedimiento=157>



**INFORME/REPORT N° CN23020174****REGLAMENTO UN N° 117R02/14 REFERENTE A EMISIÓN DE RUIDO A LA RODADURA,
ADHERENCIA EN MOJADO Y RESISTENCIA A LA RODADURA
UN REGULATION 117R02/14 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET
SURFACES AND ROLLING RESISTANCE**

Solicitante / <i>Applicant</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Fabricante / <i>Manufacturer</i>	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD. (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
Clase del neumático / <i>Tyre Class</i>	: C3
Categoría de uso / <i>Category of use</i>	: Nieve / <i>Snow</i>
Neumático de tracción / <i>Traction tyre</i>	: No / <i>No</i>
Designación de tipo de neumático / <i>Tyre type designation</i>	: FM900
Marca / <i>Brand name</i>	: FIREMAX; KPATOS
Nombre comercial / <i>Commercial name</i>	: FM900; KT900
Lugar y fecha de emisión del informe / <i>Place and date of issue</i>	: L'Albornar, Santa Oliva (Tarragona), 28/04/2023

CONCLUSIONES: La muestra ensayada de la familia CUMPLE con las prescripciones referentes a “emisión de ruido a la rodadura” y/o “adherencia en superficie mojada” y/o “resistencia a la rodadura” según el REGLAMENTO UN N° 117R02/14. De acuerdo con el punto 12.12 de las Disposiciones Transitorias, El procedimiento de ensayo para medir el agarre en mojado no tiene en cuenta las disposiciones del Suplemento 13. Las características de las muestras ensayadas están detalladas en los anexos de este informe.

CONCLUSIONS: *The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion on wet surfaces” and/or “rolling resistance” pursuant to Reglamento UN N° 117R02/14. According to point 12.12 of the Transitional Provisions, the test procedure for measuring wet grip does not take into account the provisions of Supplement 13. The characteristics of the tested samples are detailed in the annexes to the test report.*

Realizado por / *Performed by:*

Zhu Yuan
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HOMOLOGATION ENGINEER

V.B° / *Revised by:*

Josep Masip Gomez
JEFE DE DEPARTAMENTO
DEPARTMENT MANAGER

* LOS RESULTADOS PRESENTADOS SE REFIEREN UNICAMENTE A LA MUESTRA ENSAYADA. / *THE RESULTS PRESENTED REFER TO THE TESTED SAMPLE ONLY.*

* QUEDA TERMINANTEMENTE PROHIBIDA LA REPRODUCCION PARCIAL DE ESTE INFORME SIN PERMISO EXPRESO DE IDIADA. / *THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.*

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RESUMEN/ SUMMARY

1. Dimensiones incluidas en el tipo del neumático / *Dimensions included in the type of tyre* : Ver anexo Documentación técnica / *See annex Technical documentation*
2. Medidas de neumático seleccionadas para ensayo / *Tyre sizes selected for testing*
 - 2.1. Emisión de ruido a la rodadura / *Rolling sound emissions* : 385/65R22.5 160L (mayor ancho de sección / *widest section width*).
Ver Anexo 1, Informe CN23030968, IDIADA, 20/03/2023
See Annex 1, Test report CN23030968, IDIADA, 20/03/2023
 - 2.2. Adherencia en superficie mojada / *Adhesion on wet surfaces*: 385/65R22.5 160L (cumple extra 10% / *meets extra 10%*).
Ver Anexo 2, Informe CN23030969, IDIADA, 22/03/2023
See Annex 2, Test report CN23030969, IDIADA, 22/03/2023
 - 2.3. Resistencia a la rodadura / *Rolling resistance* : 385/65R22.5 160L (menor índice de carga / *lowest load index*)
Ver Anexo 3, Informe CN23031600, IDIADA, 10/03/2023
See Annex 3, Test report CN23031600, IDIADA, 10/03/2023
3. Razones para la extension (si aplica) / *Reason(s) of extension (if applicable)*
- N/A
4. Lista de Anexos a este informe / *List of Annexes to this report*:
 - 4.1. Anexo 1/ *Annex 1*: Informe referente a emisión de ruido a la rodadura / *Test report according to rolling sound emission level*.
 - 4.2. Anexo 2/ *Annex 2*: Informe referente a adherencia en superficie mojada / *Test report according to adhesion on wet surfaces*.
 - 4.3. Anexo 3 / *Annex 3*: Informe referente a resistencia a la rodadura / *Test report according to rolling resistance*.
 - 4.4. Anexo: Documentación técnica del fabricante / *Manufacturer's technical documentation*.

Lugar y fecha de emisión del informe /
Place and date of issue

L'Albornar, Santa Oliva (Tarragona), 28/04/2023



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INGENIERO DE HOMOLOGACIONES
HOMOLOGATION ENGINEER

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ANNEX 1 TO THE TEST REPORT
ROLLING SOUND EMISSIONS, REPORT No. CN23030968

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer ⁽¹⁾	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Snow
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: No
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM900
1.1.9	Tyre size	: 385/65R22.5 160L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 160 / 4,500
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 0723, 2TWLKLA38
1.1.13	Reference inflation pressure P _r [kPa]	: 900

⁽¹⁾Information provided by the client. The laboratory is not responsible for such information

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1.1.14 Test inflation pressure P_t [kPa] :

	P_t [kPa] admissible values
Front axle left wheel	$602.44 \leq 610.00 \leq 662.69$
Front axle right wheel	$589.09 \leq 590.00 \leq 648.00$
Rear axle left wheel	$598.29 \leq 600.00 \leq 658.12$
Rear axle right wheel	$608.91 \leq 610.00 \leq 669.80$

Elija un elemento.

FULFILS / NOT FULFILS

1.1.15 Test tyre internal reference :

Front left	Front right
CN-2303/00681-01	CN-2303/00681-02

Rear left	Rear right
CN-2303/00681-03	CN-2303/00681-04

1.1.16 Test rim : 11.75J x 22.5

1.1.17 Test rim internal reference :

Front left	Front right
CN-1912/02749-01	CN-1912/02749-02

Rear left	Rear right
CN-1912/02749-03	CN-1912/02749-04

1.1.18 Test tyre load [kg] :

	Load	Q_t [N] / % $\frac{Q_t}{Q_r}$
Front axle left wheel	3,264	$50 < 72.53 < 90$
Front axle right wheel	3,206	$50 < 71.24 < 90$
Rear axle left wheel	3,246	$50 < 72.13 < 90$
Rear axle right wheel	3,292	$50 < 73.16 < 90$

FULFILS / NOT FULFILS

$Q_{t,avr}$ [N] / % $\frac{Q_{t,avr}}{Q_r}$
$70 \leq 72.27 \leq 80$

FULFILS / NOT FULFILS



1.2. Test vehicle

1.2.1	Trade name	: HYUNDAI
1.2.2	Model	: XCIENT
1.2.3	Year	: 2019
1.2.4	Transmission	: Manual
1.2.5	Wheelbase [mm]	: 3,560

For Class C3 less than 5,000 mm.

FULFILS / NOT FULFILS

1.2.6	Vehicle internal reference	: CN-2001/01800
-------	----------------------------	-----------------

1.3. Test equipment

1.3.1	Sound level meter 1	: 193663
1.3.2	Sound level meter 2	: 193664
1.3.3	Manometer	: 27230
1.3.4	Weight scale	: SCS-5 / SCS-10
1.3.5	Track temperature measurement device	: 182330
1.3.6	Wind speed measurement device	: 193666
1.3.7	Speed measurement device	: 170358
1.3.8	Ambient temperature measurement device	: 193659

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2. TEST TRACK

2.1. Environment

2.1.1 Air temperature T_a [°C] : 19.5
 $5.0 < T_a < 40.0$

FULFILS / NOT FULFILS

2.1.2. Test surface temperature T_s [°C] : 26.5
 $5.0 \leq T_s \leq 50.0$

FULFILS / NOT FULFILS

2.1.3 Wind speed [m/s] : 3.9
 Less than 5 m/s

FULFILS / NOT FULFILS

2.1.4 Ambient noise [dB(A)] : 40.4
 Test result – Ambient noise ≥ 10 dB(A)

FULFILS / NOT FULFILS

2.1.5 Wind direction [°] : 68.0

2.2. Method of certification: compliance with ISO 10844:2014:

- Report number : FM / 002 / 21
- Date of check : March 6th 2023
- Issued by : IDIADA

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3. TEST RESULTS

Reference Speed: v_{ref} [km/h] : 70
 Range Speed [km/h] : 60.0 - 80.0

Run No.	Test speed [km/h]	Direction of run	Sound level left measured [dB(A)]	Sound level right measured [dB(A)]	Air temp. [°C]	Surface temp. [°C]	Sound level left temp. corrected [dB(A)]	Sound level right temp. corrected [dB(A)]
1	62.3	S → N	70.7	70.8	19.2	26.5	70.7	70.8
2	63.7	S → N	71.0	71.6	19.2	26.1	71.0	71.6
3	65.9	S → N	71.2	71.9	19.5	26.4	71.2	71.9
4	67.9	S → N	71.3	71.8	19.6	27.1	71.3	71.8
5	72.7	S → N	73.3	73.6	19.6	26.7	73.3	73.6
6	74.7	S → N	73.3	73.5	19.6	26.7	73.3	73.5
7	75.8	S → N	74.1	74.1	19.7	26.2	74.1	74.1
8	78.9	S → N	75.1	74.8	19.7	26.4	75.1	74.8

- 3.1. Regression line slope : 39.63
- 3.2. Sound level after temperature correction according to paragraph 4.3 of Annex 3 [dB(A)] : 72.6
- 3.3. Sound level according to paragraph 4.4. of Annex 3 [dB(A)] : 71
- 3.4. Limit value [dB(A)] :

Category of use	C3		
	Stage 1	Stage 2	
		Other	Traction
Normal	76	73	75
Snow	78	73	75
Snow (for use in severe Snow conditions)		74	76
Special	79	75	77

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4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 20/03/2023

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HOMOLOGATION ENGINEER



ANNEX 2 TO THE TEST REPORT
ADHESION ON WET SURFACES, REPORT No. CN23030969

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiujuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
1.1.2	Manufacturer ⁽¹⁾	: WEIFANG SHUNFUCHANG RUBBER & PLASTIC PRUDUCTS CO., LTD. Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Snow
1.1.5	Tyre for use in severe snow conditions	: No
1.1.6	Traction tyre	: No
1.1.7	Brand name / Trade mark	: FIREMAX
1.1.8	Trade description / Commercial name	: FM900
1.1.9	Tyre size	: 385/65R22.5 160L
1.1.10	Load index / Corresponding mass Q _r [kg]	: 160 / 4,500
1.1.11	Tyre structure	: Radial
1.1.12	Date code, other manufacturer markings	: 0723, 2TWLKLA38
1.1.13	Reference inflation pressure [kPa]	: 900

⁽¹⁾ Information provided by the client. The laboratory is not responsible for such information



1.1.14 Test tyre internal reference :

Front left	Front right
CN-2303/00681-01	CN-2303/00681-02
Rear left	Rear right
CN-2303/00681-03	CN-2303/00681-04

1.1.15 Test rim : 11.75J x 22.5

1.1.16 Test rim internal reference :

Front left	Front right
CN-1912/02749-01	CN-1912/02749-02
Rear left	Rear right
CN-1912/02749-03	CN-1912/02749-04

1.1.17 SRTT identification : MICHELIN 315/70 R22.5 - ASTM F 2870

1.1.18 SRTT internal reference :

Front left	Front right
CN-2204/01872-01	CN-2204/01872-02
Rear left	Rear right
CN-2204/01872-03	CN-2204/01872-04

1.1.19 Test SRTT rim : 9.00 x 22.5

1.1.20 Test SRTT rim internal reference :

Front left	Front right
CN-1912/02743-01	CN-1912/02743-02
Rear left	Rear right
CN-1912/02743-03	CN-1912/02743-04

1.1.21 Test tyre load [kg] :

SRTT 1			Candidate tyre			SRTT 2		
FL	2,858	76.2% Qr	FL	2,882	64.0% Qr	FL	2,870	76.5% Qr
FR	2,780	74.1% Qr	FR	2,786	61.9% Qr	FR	2,760	73.6% Qr
RL	2,710	72.3% Qr	RL	2,714	60.3% Qr	RL	2,704	72.1% Qr
RR	2,718	72.5% Qr	RR	2,736	60.8% Qr	RR	2,712	72.3% Qr

Between 60 per cent and 100 per cent of the load value corresponding to the load index of the tyre.

FULFILS / NOT FULFILS

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1.2. Test vehicle

- 1.2.1 Trade name : HYUNDAI
- 1.2.2 Model : XCIENT
- 1.2.3 Year : 2019
- 1.2.4 Transmission : Manual
- 1.2.5 Wheelbase [mm] : 3,560
- 1.2.6 Vehicle internal reference : CN-2001/01800
- 1.2.7 Vehicle configuration (ISO 15222) : Configuration 1 (4 candidate tyres in test vehicle)

1.3. Test inflation pressure

- 1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	641	630	630	630
SRTT 2	644	630	630	630

- 1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	2,882	4,500	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	1	630
FR	2,786	4,500		1	630
RL	2,714	4,500	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	1	630
RR	2,736	4,500		1	630



1.4. Test equipment

- 1.4.1 Manometer : 27230
- 1.4.2 Weight scale : SCS-5/ SCS-10
- 1.4.3 Thermometer : 182330
- 1.4.4 Track temperature measurement device : 182329
- 1.4.5 Speed measurement device : VBOX Sport 07013178
- 1.5.6 Brake system pressure transducer : 19-2039-07

2. TEST TRACK

- 2.1. Location : Straight line braking B, ICPG
- 2.2. Date of check on compliance of the test surface : April 1st 2022
- 2.3. Test track characteristics:
 - 2.3.1 Texture depth [mm] : 0.86
 - 2.3.2 PBC : 0.71 and 0.72
 - 2.3.3 Water depth [mm] : Average of 1.18
- 2.4. Test method : Vehicle
- 2.5. Air temperature T_a [°C] : 22.7
- 2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT 1	Candidate tyre	SRTT 2
10.6	14.5	14.5

FULFILS / NOT FULFILS

Variation during the test less than 10 °C

FULFILS / NOT FULFILS

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3. TEST RESULTS

Test run	SRTT 1		Candidate tyre		SRTT 2	
	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]	Braking distance [m]	Average deceleration [m/s ²]
1	29.42	4.20	27.04	4.57	29.16	4.23
2	29.66	4.16	26.85	4.60	29.34	4.21
3	29.07	4.25	26.25	4.70	29.48	4.19
4	-	-	26.58	4.64	-	-
5	-	-	26.43	4.67	-	-
6	-	-	27.21	4.54	-	-

Coefficient of variation

SRTT 1	Candidate tyre	SRTT 2
1.01	1.38	0.55
< 3 per cent	< 3 per cent	< 3 per cent

FULFILS / NOT FULFILS

Test run	Test Speed [km/h]	Direction of run	SRTT	Candidate tyre	Mean fully developed deceleration (mfdd)	Wet Grip Index	Pedal force [N]
1	60 - 20	S - N	315/70R22.5	---	4.20 m/s ²	---	> 600
3	60 - 20	S - N	---	385/65R22.5	4.62 m/s ²	1.10	> 600
5	60 - 20	S - N	315/70R22.5	---	4.21 m/s ²	---	> 600

Wet grip index G = 1.10

3.1. Limit value

Category of use	Wet Grip Index (+10% Wet Grip Index) (G)			
	C2		C3	
	Other	Traction	Other	Traction
Normal	≥ 0.95 (≥ 1.05)	≥ 0.85 (≥ 0.94)	≥ 0.80 (≥ 0.88)	≥ 0.65 (≥ 0.72)
Snow			≥ 0.65 (≥ 0.72)	
Snow in severe conditions	≥ 0.85 (≥ 0.94)	≥ 0.85 (≥ 0.94)	≥ 0.65 (≥ 0.72)	≥ 0.65 (≥ 0.72)
Special			≥ 0.65 (≥ 0.72)	



4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 22/03/2023

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ANNEX 3 TO THE TEST REPORT
ROLLING RESISTANCE, REPORT N° CN23031600

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant ⁽¹⁾ : HANGZHOU SHACE AUTOMOTIVE TECHNOLOGY SERVICE CO., LTD
 Room 303, Unit B Building 1, Zhejiang National University Science Park, No.9 Jiuahuan Road, Jianggan District, Hangzhou City, Zhejiang Province, P.R. China
- 1.1.2 Manufacturer ⁽¹⁾ : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD.
 (Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG (CHINA)
- 1.1.3 Tyre class : C3
- 1.1.4 Category of use : Snow
- 1.1.5 Tyre for use in severe snow conditions : No
- 1.1.6 Traction tyre : No
- 1.1.7 Brand name / Trade mark : FIREMAX
- 1.1.8 Trade description / Commercial name : FM900
- 1.1.9 Tyre size : 385/65R22.5 160L
- 1.1.10 Load index / Corresponding mass Q_r [kg] : 160 / 4,500
- 1.1.11 Tyre structure : Radial
- 1.1.12 Date code, other manufacturer markings : 0723
- 1.1.13 Inflation pressure [kPa] : 900
- 1.1.14 Test tyre internal reference : CN23031600
- 1.1.15 Test rim : 11.75 x 22.5
- 1.1.16 Test rim internal reference : 11.75 x 22.5
- 1.1.17 Test rim material : Steel

(1) Information provided by the client. The laboratory is not responsible for such information

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1.2. Test machine data

1.2.1 Identification : 04-1086, 04-807

1.2.2 Drum diameter [mm] : 1,707.6

FULFILS/NOT FULFILS

1.2.3 Surface : Smooth steel

1.2.4 Roughness [μm] : ≤ 6.3

FULFILS/NOT FULFILS

1.3. Test data

1.3.1 Measurement method : Force

1.3.2 Test speed [km/h] : 80

C3: 80 km/h (K:110 km/h and higher and load symbol > to 121);

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 160 / 4,500

1.3.4 Test load [kg / N] : 3,825 / 37,510

C2/C3 (% of single load): 85 (*)

(*) as a percentage of single load, or 85 per cent of maximum load capacity for single application specified in applicable tyre standards manuals if not marked on tyre.

FULFILS/NOT FULFILS

1.3.5 Test inflation pressure, initial [kPa] : 900

C2/C3: corresponding to maximum load capacity for single application (*)

(*): inflation pressure marked on sidewall, or if not market on sidewall, as specified in applicable tyre standards manuals corresponding to maximum load capacity for single application.

FULFILS/NOT FULFILS

1.3.6 Distance from the tyre axis to the drum outer surface under steady state conditions during test (r_L)[m] : 0.505

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.536

1.3.8 Ambient temperature T_{am} [$^{\circ}\text{C}$] : 25.07

$20.0 \leq T_{am} \leq 30.0$

FULFILS/NOT FULFILS

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1.3.9 Skim test load [N] : 400.159

$C3 \leq 500 \text{ N}$

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 126.556

1.3.11 Spindle force during skim test (Ft) [N] : 7.950

1.3.12 Parasitic loss (Fpl) [N] : 12.944

1.3.13 Rolling resistance (Fr) [N] : 188.520

2. TEST RESULTS

2.1. Rolling resistance coefficient

2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 5.026

2.1.2 Temperature corrected value [N/kN] : 5.028

2.1.3 Temperature and drum diameter corrected value [N/kN] : 4.884

Rolling resistance coefficient C_r [N/kN] = 4.884

2.2. Limit value [N/kN]

	Stage 1	Stage 2
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

For "snow tyre for use in severe snow conditions", the limits shall be increased by 1 N/kN.

* THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE.
 * THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.
 * MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY
 * THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Qingdao Product Quality Testing Research Institute (Qingdao, China)

Date of test: 10/03/2023

袁柱

Zhu Yuan
INGENIERO DE HOMOLOGACIONES
HOMOLOGATION ENGINEER

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* MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY
* THE DECISION RULE USED, ACCORDING TO THE ILAC-G8 STANDARD, WAS THE BINARY STATEMENT FOR SIMPLE ACCEPTANCE

DOCUMENTACIÓN TÉCNICA /
TECHNICAL DOCUMENTATION

Type of tyre:

FM900



Date : Apr. 04.2023

Ext. : 00

**REGARDING ROLLING SOUND EMISSIONS LEVEL AND/OR TO ADHESION
PERFORMANCE LEVEL ON WET SURFACES AND/OR ROLLING RESISTANCE
ACCORDING TO REGULATION 117.02**

1. GENERAL

- 1.1. The performance characteristics to be assessed for the tyre type: : Rolling sound emissions level / adhesion performance level on wet surfaces / rolling resistance level / ~~snow performance level~~
- 1.2. Manufacturer's name and address : WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
(Northeast Corner, Crossing of Xihuan Road and Jinguang Street), Chenming Industrial District, Shouguang 262719, Weifang, SHANDONG(CHINA)
- 1.3. If applicable, name and address of manufacturer's representative : N.A.
- 1.4. Brand name(s)/Trademark(s) : FIREMAX; KPATOS
- 1.5. Trade description(s)/Commercial name(s) : FM900; KT900
- 1.6. Type of tyre : FM900

2. TYRE

- 2.1. Tyre class : ~~C1/C2/C3~~⁽¹⁾
- 2.2. Category of use : ~~Normal/snow/special~~⁽¹⁾
- 2.2.1. Whether tyre for use in severe snow conditions : ~~Yes/No~~⁽¹⁾
- 2.2.2. For Class C2, C3 tyre, whether traction tyre : ~~Yes/No/N.A.~~⁽¹⁾
- 2.3. Tyre structure : ~~Diagonal/bias belted~~/radial⁽¹⁾
- 2.4. A list of tyre size designations covered by this application and specifying for each brand name/trademark and/or each trade description /commercial name the applicable tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not. : Refer to attachment 1

3. The application for approval shall be accompanied (in triplicate) by

- 3.1. Details of the major features, with respect to the effects on the performance (i.e. rolling sound emission level, adhesion on wet surfaces, rolling resistance and snow grip) of the tyres, including the tread pattern, included in the designated range of tyre sizes. : Refer to Attachment 2
- 3.2. Drawings or photographs of the tyre sidewall, showing the information given in paragraph 3.1.8. above and the approval marking referred to in paragraph 4. : Refer to Attachment 3
- 3.3. In the case of applications relating to special use tyres, a copy of the mould drawing of the : N.A.

⁽¹⁾ Strike out what does not apply.
R117-V.00(2021-09-30)

tread pattern shall be supplied in order to allow verification of the void-to-fill ratio.

Attachment 1-List of Tyre Size

Brand name(s)/Trademark(s):
FIREMAX; KPATOS

Trade description(s)/Commercial name(s):
FM900; KT900

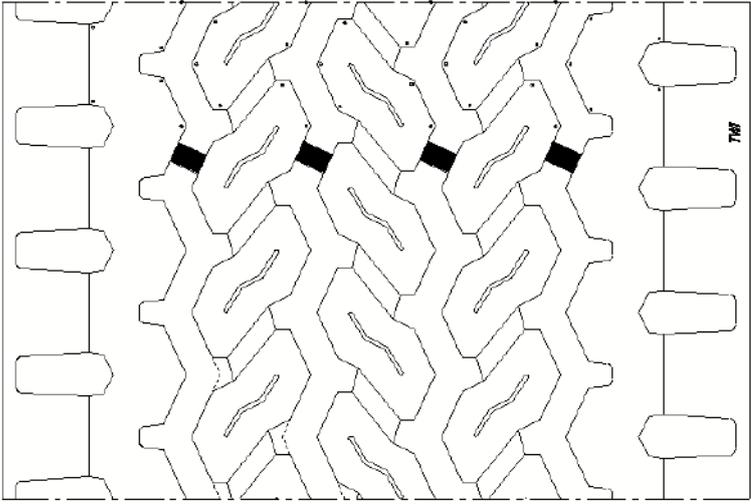
	Type Approval Number	Tyre size designations / Load index / Speed symbol	Standard or Extra load (for Class C1 tyres)	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/kN of Stage II	Limit for Snow grip index
1	E9-006536	385/65R22.5 160L	N.A.	73	0.65	6.5	N.A.
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

iDiADA CN23020174

Worst Case Selection

Test size for rolling sound	:	385/65R22.5 160L
Because of	:	The largest nominal section width; or The largest nominal section width and the lowest aspect ratio; or The largest nominal section width and lowest aspect ratio and the largest rim diameter.
Test size for wet grip	:	385/65R22.5 160L
Because of	:	Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $0.72 < 1.1$ (Wet grip test result)
Test size for rolling resistance	:	385/65R22.5 160L
Because of	:	Lowest load index; or Calculated limit value = (RRC limit value R117 - 0.3#N/kN) - 0.06* x (LI-candidate - LI lowest) The new limit value is $10.25 > 9.08$ (Rolling resistance test result)
Test size for snow grip	:	
Class C1 and C2	÷	The widest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.10 < 1.26$ (Snow grip test result)
Class C3	÷	The smallest nominal section width; or Any tyre size that meets the required limit value of the regulation plus (at least) the extra safety margin may represent the whole tyre type range. The new limit value is $1.45 < 1.55$ (Snow grip test result)

Attachment-2 Details of the major features

Drawing of the tread pattern (for measured tyre using for tyre noise, wet grip and rolling resistance performance)	
Manufacturer name	: WEIFANG SHUNFUCHANG RUBBER AND PLASTIC PRODUCTS CO., LTD
Pattern name	: FM900;KT900
Tyre Size	: 385/65R22.5 160L
Market	: EU
Pitch number	: 54
Pitch ratio (Max/Min)	: 1: 1
Groove area ratio [%]	: 32%
Width: main grooves [mm]	: 15.0
Depth: center groove [mm]	: 15.0
Depth: shoulder groove [mm]	: 15.0
Tyre mass [kg]	66.0
Tread depth [mm]	15.0
Tread width [mm]	284.5
Curvature radius of tread crown [mm]	1500
Tyre outer diameter[mm]	1070
Tread plies	1STEEL+ 4 STEEL
Tyre tread pattern	

Attachment 3 Drawings or photographs of the tyre sidewall

Drawings of the sidewall
(for measured tyre using for tyre noise, wet grip and rolling resistance performance)

The drawings include a cross-section of the tyre sidewall showing the BELT, RADIAL CARCASS, INNERLINER, and BEAD. Dimensions A, B, and C are indicated. Below this are two circular views of the tyre moulds, labeled 'UPPER MOULD' and 'LOWER MOULD', with various numbered callouts (1-13) corresponding to the table. A tread pattern diagram is also shown, labeled 'PM900:KT900'.

1	FIREMAX:KPATOS
2	385/65R22.5 160L
3	PM900:KT900
4	STANDARD RIM 11.75
5	LOAD RANGE L 20PR MAX.LOAD 4500 kg (9920 lbs) AT 900 KPa(130 psi) COLD PLIES:SIDEWALL 1STEEL TREAD 1 STEEL +4 STEEL
6	SAFETY WARNING:
7	TUBELESS RADIAL
8	MADE IN CHINA
9	Ⓢ 000000 (ECE APPROVAL MARK AND NUMBER)
10	DOT 21V LAKASS
11	DATE CODE 0000
12	RE regroovable
13	M+S

385/65R22.5	FIREMAX KPATOS	PM900 KT900	160	L	T/L	1072	389	298.45	15.0
TYRE SIZE	TRADE MARKS	TREAD PATTERNS	LOAD INDEX	SPEED SYMBOL	TYPE	A(mm)	B(mm)	C(mm)	SKID DEPTH(mm)
APPROVED BY		CHECKED BY		DRAWN BY		WEIPANG SHENFUCHANG RUBBER AND PLASTIC PRODUCTS CO, LTD.			