



THE NETHERLANDS

COMMUNICATION

Concerning ⁽¹⁾:

- approval granted
- approval extended
- approval refused
- approval withdrawn
- production definitely discontinued

of a type of tyre with regard to 'rolling sound emission level' and/or 'adhesion performance on wet surfaces' and/or 'rolling resistance' pursuant to UN Regulation number 117.

Approval number ⁽⁵⁾: E4*117R02/15*12648*02
Suffix(es) ⁽⁶⁾: 02S2WR2

- | | | |
|--------|---|---|
| 1. | Manufacturer's name and address | : Wanli Tire Corporation Limited
3 Wanli Road Aotou Town, Conghua 510940
Guangzhou City, Guangdong Province
China (PRC) |
| 2. | If applicable, name and address of manufacturer's representative | : Not applicable |
| 3. | "Tyre class" of the type of tyre | : Class C1 / Class C2 / Class C3 ⁽¹⁾ |
| 4. | "Category of use" of the type of tyre | : normal / snow / special ⁽¹⁾ |
| 4.1. | Tyre for use in severe snow conditions | : yes/no ⁽¹⁾ |
| 4.1.1. | Ice grip tyre | : yes/no ⁽¹⁾ |
| 4.2. | Traction tyre | : yes/no ⁽¹⁾ |
| 5. | Tyre structure | : diagonal / bias belted / radial / run-flat tyre ⁽¹⁾ |
| 6. | Type of tyre designation | : |
| 6.1. | Brand name(s)/trademark(s) of the type of tyre | : AUFINE; MAXELL |
| 6.2. | Trade description(s)/commercial name(s) of the type of tyre | : SMART ADR8; SUPER LD2; MASTER MAS600 |
| 7. | Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity tests | : <u>IDIADA Automotive Technology, S.A.</u>
<u>L'Albornar, P.O. Box 20</u>
<u>43710 Santa Oliva (Tarragona), SPAIN</u> |
| 8. | Performance(s) approved | : sound level at (stage 1/stage 2) ⁽¹⁾ , wet adhesion level, rolling resistance level (stage 1/stage 2) ⁽¹⁾ |

- 8.1. 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 ⁽¹⁾.
- 8.2. Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per the test report examples shown in the appendix to Annex 5: 1.05 (G) using the vehicle or trailer method ⁽¹⁾.
- 8.3. 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: 5.80 N/kN
- 8.4. 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 ⁽⁵⁾ to Annex 7: N/A (Snow grip index) using the brake on snow method ⁽¹⁾, spin traction method ⁽¹⁾ or acceleration method ⁽¹⁾.
- 8.4.1. 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 ⁽¹⁾.
9. Number of report issued by that service : CN24021075
10. Date of report issued by that service : 27/02/2024
11. Reason(s) of extension (if applicable) : Change of technical service;
Upgrade of regulation supplement number;
Addition of tyre size unnecessary for repetition test.
12. Any remarks : ---
13. Place : Zoetermeer
14. Date : 08 March 2024
15. Signature :



T. H. K. Spatz

16. Annexed to this communication are: SMART ADR8-S2WR2-02
- 16.1. 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 ⁽⁶⁾.
- 16.2. 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⁾ Strike out what does not apply.

⁽⁵⁾ Appendix 2 for C1 and C2 tyres.
Appendix 3 for C3 tyres.

⁽⁶⁾ In the case of tyre use in severe snow conditions a test report according to Appendix 2 or Appendix 3, as applicable, to Annex 7 shall be submitted. Additionally in the case of ice grip tyre a test report according to Appendix 2 to Annex 8 shall be submitted.

Statement manufacturer and authorization regarding application

This statement must only be sent with new "00" applications. This applies to both the statements that the application has not been submitted to another authority and the authorization of the applicant. If the authorized party is changed in the meantime (i.e. in case of an extension or correction request), this declaration must be filled in again.

1 **EC & UNECE type-approval number** : E4*117R02/15*12648*02

2 ☒ **Manufacturer/** ☐ **Manufacturer's representative** ⁽¹⁾

3 **Company name** : Wanli Tire Corporation Limited

4 **Name authorized person** : Liangqing Ye

5 **Job title** : Homologation Manager

6 **E-mail address** : yeliangqing@wanlitire-hf.com

7 **Address manufacturer** : 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province
China (PRC)

8 **Country** : China(PRC)

9 **Statement**

10 **Hereby** : Liangqing Ye

11 **declares on behalf of**
the manufacturer : Wanli Tire Corporation Limited

12 **for the application with**
type-approval number : E4*117R02/15*12648*02

13 **the following:**

14 a) the manufacturer has not applied for an EC & UNECE type-approval for the same type to any other approval
authority, and no other approval authority granted the manufacturer such an approval;

15 b) no approval authority has refused to grant type-approval of that type;

16 c) no approval authority has withdrawn type-approval of that type;

17 d) the manufacturer has not revoked an application for a type-approval of that type.

18 **Authorization regarding handling of this application (if applicable)** ⁽²⁾

19 **Company name** : IDIADA Automotive Technology, S.A.

20 **E-mail address** : QualityHomologations@idiada.com

21 **Address** : PO Box 20 Santa Oliva, l'Albornar 43710, Tarragona

22 **Country** : Spain

23 **Authorization**

24 **By means of this**
declaration, I : Liangqing Ye

25 **on behalf of** : Wanli Tire Corporation Limited

26 **authorizes** : IDIADA Automotive Technology, S.A.

27 **to respectively apply for a type-approval with type-approval number:**
E4*117R02/15*12648*02

28 **handle all communication concerning this application and receive the type-approval certificate.**

29 **Date**

Place

Name:

30 22/02/2024

Hefei, China

Wanli Tire Corporation Limited

31 On their behalf, signature :

32 Name : Liangqing Ye



⁽¹⁾ Mark the specific checkbox.

⁽²⁾ This authorization only concerns the application procedure and all activities that are directly or indirectly related to this procedure. If and insofar as other procedures, including the lodging of objections, are deemed necessary, a new authorization must be submitted in respect of that specific procedure.

TECHNICAL DOCUMENTATION

RELATING TO ECE TYPE-APPROVAL FOR A TYPE OF TYRE WITH REGARD TO ROLLING SOUND EMISSIONS AND TO ADHESION PERFORMANCE ON WET SURFACES AND/OR TO ROLLING RESISTANCE (ECE Regulation No. 117. 02, Supplement 15)

1. GENERAL
- 1.1. The performance characteristics to be assessed for the tyre type

: rolling sound emission level and adhesion performance level on wet surfaces and rolling resistance ~~and snow grip index~~
- 1.2. Manufacturer's name

: Wanli Tire Corporation Limited
- 1.3. Name and address of applicant

: Wanli Tire Corporation Limited
3 Wanli Road Aotou Town, Conghua 510940
Guangzhou City, Guangdong Province China (PRC)
- 1.4. Address(es) of manufacturing plant(s)

: same with the applicant
- 1.5. Brand name(s), Trade description(s) or Trade mark(s) to be used for particular tyre type-approval requested

: AUFINE; MAXELL (trade mark)
SMART ADR8; SUPER LD2; MASTER MAS600
(tyre tread pattern name)
2. Tyre
- 2.1. Tyre classification (class C1, C2, C3)

: ~~Class C1 / Class C2 /~~ Class C3
- 2.2. Section width range for class C1 tyres

: see attached "list of tyre size"
- 2.3. Tyre structure

: ~~diagonal / bias belted /~~ radial / ~~run flat~~ tyre
- 2.4. For Class C1 tyres, state weather

:
- 2.4.1. Reinforced (or extra load) in case of approval with regarding to rolling sound emission level

: see attached "list of tyre size"
- 2.4.2. Speed category symbol "Q" or below (not inc-luding "H") or "R" and above (including "H") in case of snow tyres for approval with regar ding to adhesion on wet surfaces

: not applicable
- 2.5. For Class C2 or C3 tyres, state weather "Traction tyre"

: Yes /~~No~~
- 2.6. Category of use (normal, snow, special)

: ~~normal / snow (snow tyre for use in severe snow-conditions) /~~ special
- 2.7. A list of tyre designations covered by this application

: see attached "list of tyre size"
- 2.8. Details of major features, with respect to the effects on tyre performance (i.e. rolling emission level or adhesion on wet surfaces, respectively) of the tread pattern(s) to be used on the designated range of tyre sizes.

: see attached "drawing of tread pattern"
- 2.9. In the case of "special use tyre", drawing of the tread pattern supplied in order to verify the void-to-fill ratio.

: not applicable
- 2.10. Submitted for approval on (date)

: Jan 29, 2024

MANUFACTURER'S STAMP

Signature:

..........
Name:

THIS APPLICATION IS ACCOMPANIED BY:

- List of tyre size
- Drawing of tread pattern
- The test report

I. List of tyre size

Brand name(s) or Trade mark(s) : AUFINE; MAXELL
Tread pattern : SMART ADR8; SUPER LD2; MASTER MAS600

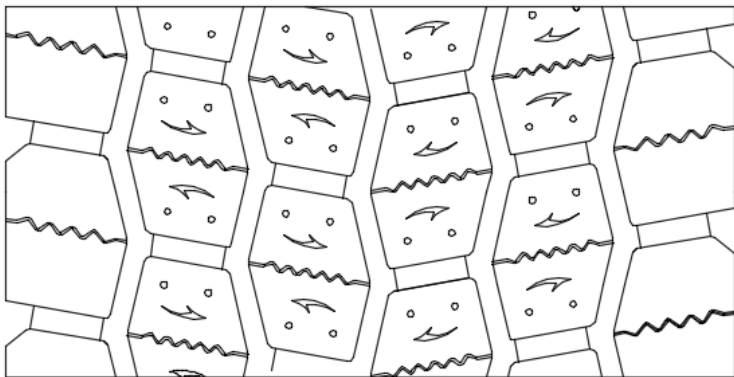
Tyre size	Approval No	Limit for rolling sound dB(A) of Stage II	Limit for wet grip index	Limit for rolling resistance coefficient N/KN of Stage II
295/80R22.5	E4-0046010	75	0.65	6.5
154/150L(152/148M)				
315/80R22.5	E4-0046011	75	0.65	6.5
156/150L(154/150M)				
315/70R22.5	E4-0051710	75	0.65	6.5
156/150L(154/150M)				
<u>315/80R22.5</u>	<u>E4-0052094</u>	<u>75</u>	<u>0.65</u>	<u>6.5</u>
<u>160/157J(157/154K)</u>				

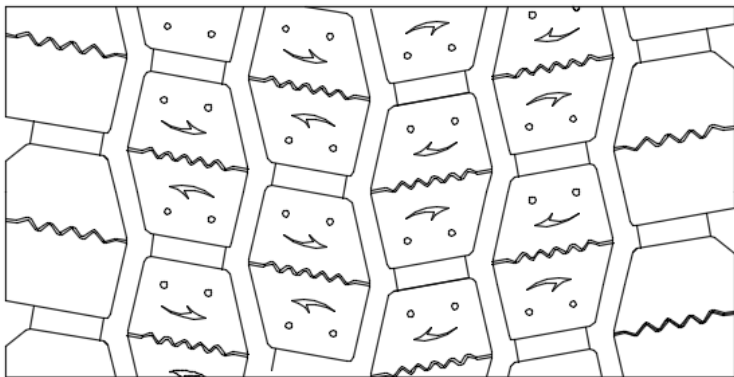
II. Worst Case Selection

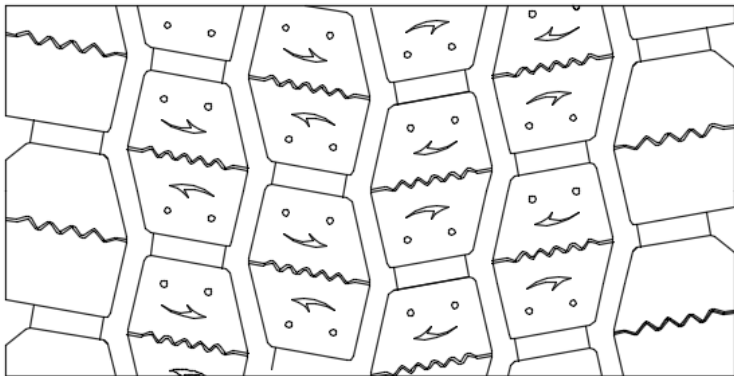
Test size for rolling sound : 315/70R22.5 156/150L(154/150M)
Because of : Largest nominal section width and lowest aspect ratio

Test size for wet grip : 315/80R22.5 156/150L(154/150M)
Because of : The wet grip test result of 315/80R22.5 156/150L(154/150M) is G= 1.05, which is above 110% of the limit value of ECE-R117(for snow tyre-for use in severe snow condition, the 110% limit value is G=0.715)

Test size for rolling resistance : 295/80R22.5 154/150L(152/148M)
Because of : Lowest load capacity index

III. Drawing of the tread pattern (for measured tyre using for tyre noise)		
Manufacturer name	:	Wanli Tire Corporation Limited
Pattern name	:	SMART ADR8
Tyre Size	:	315/70R22.5 156/150L(154/150M)
Market	:	EU/US
Pitch number	:	46
Pitch ratio	:	1:1
Void volume [%]	:	25.7%
Width: main grooves [mm]	:	10
Depth: center groove [mm]	:	20.6
Depth: shoulder groove [mm]	:	20.6
Tyre tread pattern	:	 <p>46 Blocks</p>

III. Drawing of the tread pattern (for measured tyre using for wet grip performance)		
Manufacturer name	:	Wanli Tire Corporation Limited
Pattern name	:	SUPER LD2
Tyre Size	:	315/80R22.5 156/150L(154/150M)
Market	:	EU/US
Pitch number	:	50
Pitch ratio	:	1:1
Void volume [%]	:	26.1%
Width: main grooves [mm]	:	7.8
Depth: center groove [mm]	:	22.6
Depth: shoulder groove [mm]	:	22.6
Tyre tread pattern	:	 <p>50 Blocks</p>

Drawing of the tread pattern (for measured tyre using for tyre rolling resistance test)		
Manufacturer name	:	Wanli Tire Corporation Limited
Pattern name	:	SUPER LD2
Tyre Size	:	295/80R22.5 154/150L(152/148M)
Market	:	EU/US
Pitch number	:	50
Pitch ratio	:	1:1
Void volume [%]	:	24%
Width: main grooves [mm]	:	7.5
Depth: center groove [mm]	:	21
Depth: shoulder groove [mm]	:	21
Tyre mass [kg]	:	70
Tread depth [mm]	:	21
Tread width [mm]	:	260
Curvature radius of tread crown [mm]	:	1000
Tyre outer diameter [mm]	:	1044
Tread plies	:	5 STEEL
Tyre tread pattern	:	 <p>50 Blocks</p>

IV. Drawing of the tyre sidewall

Tyre Size

: 315/70R22.5 156/150L(154/150M)



Upper mold




Lower mold

1.AU FINE;MAXELL	1.AU FINE;MAXELL
2. MADE IN CHINA	2.MADE IN CHINA
3.SAFETY WARNING	3.SAFETY WARNING
4.315/70R22.5	4.315/70R22.5
5.STANDARD RIM 9.00	5.STANDARD RIM 9.00
6.DOT 026BM ****	6.DOT 026BM ****
7. 315/70R22.5 156/150L (154M) 20PR AT 900kPa 150	7. 315/70R22.5 156/150L (154M) 20PR AT 900kPa 150
	8. E4 XXXXXXXX S2WR2 XXXXXXX
9.*** (MOLD NUMBER)	9.*** (MOLD NUMBER)
10.SMART ADR8; SUPER LD2;MASTER MAS600	10.SMART ADR8; SUPER LD2;MASTER MAS600
11.REGROOVABLE	11.REGROOVABLE
12. L.R.L PLIES:TREAD STEEL 5 SIDEWALL STEEL 1 20PR MAX.LOAD SINGLE 4000kg(8820lbs) AT 900kPa(130psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 900kPa(130psi) COLD	12.L.R.L PLIES:TREAD STEEL 5 SIDEWALL STEEL 20PR MAX.LOAD SINGLE 4000kg(8820lbs) AT 900kPa(130psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 900kPa(130psi) COLD
	13.*** (DATE CODE)
14.M+S	14.M+S
15.RADIAL TUBELESS	15.RADIAL TUBELESS
16.TRACTION	16.TRACTION

IV. Drawing of the tyre sidewall

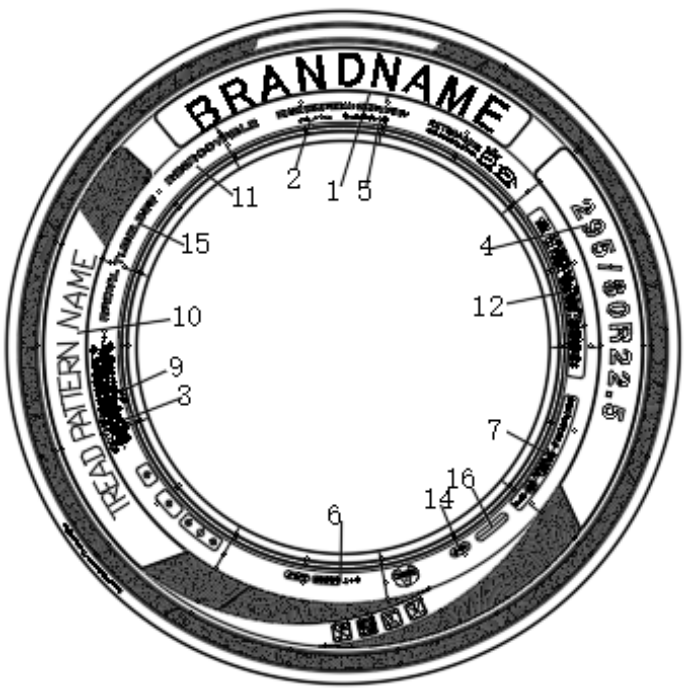

Tyre Size

: 315/80R22.5 156/150L(154/150M)

 <p>Upper mold</p>	 <p>Lower mold</p>
1.AU FINE;MAXELL	1.AU FINE;MAXELL
3. MADE IN CHINA	2.MADE IN CHINA
3.SAFETY WARNING	3.SAFETY WARNING
4.315/80R22.5	4.315/80R22.5
5.STANDARD RIM 9.00	5.STANDARD RIM 9.00
6.DOT 026BE ****	6.DOT 026BE ****
7. 315/80R22.5 156/150L <u>154M</u> 20PR AT 850kPa <u>150</u>	7. 315/80R22.5 156/150L <u>154M</u> 20PR AT 850kPa <u>150</u>
	9. <u>E4</u> XXXXXXXX S2WR2 XXXXXXX
9.****(MOLD NUMBER)	9.****(MOLD NUMBER)
10.SMART ADR8; SUPER LD2;MASTER MAS600	10.SMART ADR8; SUPER LD2;MASTER MAS600
11.REGROOVABLE	11.REGROOVABLE
12.L.R.L PLIES:TREAD STEEL 5 SIDEWALL STEEL 1 20PR MAX.LOAD SINGLE 4000kg(8820lbs) AT 850kPa(123psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 850kPa(123psi) COLD	12.L.R.L PLIES:TREAD STEEL 5 SIDEWALL STEEL 20PR MAX.LOAD SINGLE 4000kg(8820lbs) AT 850kPa(123psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 850kPa(123psi) COLD
	13.****(DATE CODE)
14.M+S	14.M+S
15.RADIAL TUBELESS	15.RADIAL TUBELESS
16.TRACTION	16.TRACTION

Drawing of the tyre sidewall

Tyre Size : 295/80R22.5 154/150L(152/148M)

 <p>Upper mold</p>	 <p>Lower mold</p>
1.AU FINE; MAXELL	1.AU FINE; MAXELL
2.MADE IN CHINA	2.MADE IN CHINA
3.SAFETY WARNING	3.SAFETY WARNING
4.295/80R22.5	4.295/80R22.5
5.STANDARD RIM 9.00	5.STANDARD RIM 9.00
6.DOT 026BF ****	6.DOT 026BF ****
7. 295/80R22.5 154/150L (152M) 20PR AT 850kPa 148	7. 295/80R22.5 154/150L (152M) 20PR AT 850kPa 148
	8. E4 XXXXXXXX S2WR2 XXXXXXX
9.****(MOLD NUMBER)	9.****(MOLD NUMBER)
10.SMART ADR8; SUPER LD2	10.SMART ADR8; SUPER LD2
11.REGROOVABLE	11.REGROOVABLE
12.L.R.J PLIES:TREAD STEEL 5 SIDEWALL STEEL 1 20PR MAX.LOAD SINGLE 3750kg(8270lbs) AT 850kPa(123psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 850kPa(123psi) COLD	12.L.R.L PLIES:TREAD STEEL 5 SIDEWALL STEEL 1 20PR MAX.LOAD SINGLE 3750kg(8270lbs) AT 850kPa(123psi) COLD MAX.LOAD DUAL 3350kg(7390lbs) AT 850kPa(123psi) COLD
	13.****(DATE CODE)
14.M+S	14.M+S
15.RADIAL TUBELESS	15.RADIAL TUBELESS
16.TRACTION	16.TRACTION

REPORT No. CN24021075

UN REGULATION No. 117R02/15 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET SURFACES AND ROLLING RESISTANCE

Approval number	: E4*117R02/15*12648*02
Approved performances	: S2WR2
Applicant	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
Manufacturer	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
Tyre class	: C3
Category of use	: Snow
Snow tyre for use in severe snow conditions	: No
Ice grip tyre	: No
Traction tyre	: Yes
Brand name / Trade mark	: AUFINE; MAXELL
Trade description/ Commercial name	: SMART ADR8; SUPER LD2; MASTER MAS600
Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 27/02/2024

CONCLUSIONS: The tested samples of the family FULFIL the technical prescriptions with regard to “rolling sound emissions level” and/or “adhesion performance on wet surfaces” and/or “rolling resistance” and/or “snow performance” pursuant to UN REGULATION No. 117R02/15. According to point 12.11/12.12 of the Transitional Provisions, the snow performance test uses SRTT14 as reference tyre. 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.

Performed by:



Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

Revised by:



Josep Masip Gomez
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.
* MEASUREMENT UNCERTAINTY OF THE RESULTS HAS BEEN CALCULATED BY THE LABORATORY.

REPORT No. CN24021075

SUMMARY

1. Dimensions included in the type of tyre : See Manufacturer's technical documentation attached
2. Tyre sizes selected for testing
 - 2.1. Tyre size tested for rolling sound emissions : 315/70R22.5 156/150L(154/150M) (widest section width)
See Annex 1, Test report CNT230344, BUREAU VERITAS CERTEST S.r.l., 10/09/2023
 - 2.2. Tyre size tested for adhesion on wet surfaces: 315/80R22.5 156/150L(154/150M) (meets extra 10%)
See Annex 2, Test report CN21070113, IDIADA Automotive Technology, S.A., 07/07/2021
 - 2.3. Tyre tested for rolling resistance : 295/80R22.5 154/150L(152/148M) (lowest load index)
See Annex 3, Test report CN21070660, IDIADA Automotive Technology, S.A., 30/07/2021
 - 2.4. Tyre tested for snow performance : N/A
3. Reason(s) of extension (if applicable) :
 - Change of technical service
 - Upgrade of regulation supplement number
 - Addition of tyre size unnecessary for repetition test
4. List of Annexes to this report
 - 4.1. Annex 1: Test report according to rolling sound emission level.
 - 4.2. Annex 2: Test report according to adhesion on wet surfaces.
 - 4.3. Annex 3: Test report according to rolling resistance.
 - 4.4. Annex: Manufacturer's technical documentation.

Place and date of issue: L'Albornar, Santa Oliva (Tarragona), 27/02/2024

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

ANNEX 1

ANNEX 1 TO THE TEST REPORT ROLLING SOUND EMISSIONS



REPORT Nr: CNT230344 Ver. 00

Manufacturer: Wanli Tire Corporation Limited



ISP N° 05091SP

Signatory member of the
EA, IAF and ILAC Mutual
Recognition Agreements

2.2. ROLLING SOUND EMISSION - TEST PROTOCOL

Test track	
Location of test track (see "Test site ID" at point 2.)	: A)
Date of track certification to ISO 10844:2014	: 14/06/2023
Certification issued by	: Shandong Luzhong Highway Municipal Testing Co., Ltd.
Test tyre details and markings	
Brand name / trademark	: AUFINE
Trade description / Commercial name	: SMART ADR8
Tyre Class	: <input type="checkbox"/> C1 <input type="checkbox"/> C2 <input checked="" type="checkbox"/> C3
Tyre size designation	: 315/70R22.5
Tyre service description	: 156/150L (154/150M)
Tyre structure	: Radial
Category of use	: Snow
Tubeless tyre	: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Snow tyre for use in severe snow conditions	: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Traction tyre	: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> N/A
Reinforced tyre (or extra load)	: <input type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> N/A
Manufacturing date code	: 2723
Test Vehicle	
Make	: SINOTRUK
Model	: STEYR
Year	: 2016
Wheelbase [mm]	: 3600
Test Data	
Test rim width code	: 9.00
Reference load (Q _r) [kg]	: 4000
Reference test inflation pressure (P _r) [kPa]	: 900
Reference speed [km/h]	: 70
Temperature measurement sensor type	: CSPB017
Test date	: 19/07/2023

BUREAU VERITAS CERTEST srl, Subject to the activity of management and coordination exercised by the parent company Bureau Veritas SA
Via Risorgimento, 16 | 56028, San Miniato (PI) | Italy - Tel.: +39 0571 49626 | Fax: +39 0571 469835
Technical Service designated by RDW - Designation nr. RDWT-398
IR_C-R117_02_14_Rev02_20230707

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REPORT Nr: CNT230344 Ver. 00

Manufacturer: Wanli Tire Corporation Limited



ISP N° 050915P

Signatory member of the EA, IAF and ILAC Mutual Recognition Agreements

	Front left	Front right	Rear left	Rear right	Average
Test load [kg] (Q _t)	2953	2735	2850	3040	2895
Test load [%]	73.8%	68.4%	71.3%	76.0%	72.4%
Inflation pressure (cold) [kPa]	650	590	620	670	--

Test result									
Run No.	Test speed [km/h]	Direction of run	Sound level measured [dB(A)]		Air temp. [°C]	Track temp. [°C]	Sound level temp. corrected [dB(A)] ^b		Comments
			left ^a	right ^a			left ^a	right ^a	
1	62.0	S→N	75.5	75.1	33.2	41.8	--	--	n.a.
2	63.9	S→N	76.4	75.9	33.2	44.3	--	--	n.a.
3	66.4	S→N	76.7	76.1	33.3	45.3	--	--	n.a.
4	67.9	S→N	76.9	76.8	33.6	44.7	--	--	n.a.
5	72.4	S→N	76.9	77.0	33.1	43.8	--	--	n.a.
6	74.2	S→N	76.8	77.2	34.2	44.2	--	--	n.a.
7	76.0	S→N	77.7	77.4	34.5	45.0	--	--	n.a.
8	78.2	S→N	77.9	77.6	34.4	44.0	--	--	n.a.

^a Relative to the vehicle.
^b Omitted, if regression according to paragraph 4.3. of Annex 3 is made on the uncorrected rolling sound level values.

Regression line slope	:	20.32
Sound level according to paragraph 4.3. of Annex 3 [dB(A)]	:	76.76
Final sound level according to paragraph 4.4. of annex 3 [dB(A)]	:	75
Limit value (stage □1 / ▣2) [dB(A)]	:	75

ANNEX 2



REPORT Nº CN21070113

UN REGULATION No. 117R02/12 RELATED TO ADHESION ON WET SURFACES

Applicant	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
Manufacturer	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
Tyre class	: C3
Category of use	: Snow
Traction tyre	: Yes
Brand name / Trade mark	: MAXELL
Trade description/ Commercial name	: SUPER LD2
Tyre size	: 315/80R22.5 156/150L(154/150M)
Wet grip index relative to SRTT according to paragraph 2.2.2.7.5.	: 1.05
Place and date of issue	: L'Albornar, Santa Oliva (Tarragona), 07/07/2021

CONCLUSIONS: The samples of the family have been tested according to the technical prescriptions with regard to "adhesion performance on wet surfaces" pursuant to UN Regulation No. 117R02/12.
The characteristics of the tested samples are detailed in the annex to the test report.
Test configuration as per paragraph 2.2.2.2.: Configuration 1 (4 candidate tyres in test vehicle)

Performed by:



Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

Revised by:



Josep Masip Gomez
DEPARTMENT MANAGER

- * THE TESTS HAVE BEEN CARRIED OUT BY IDIADA AUTOMOTIVE TECHNOLOGY, S.A. LABORATORY ACCREDITED BY ENAC WITH NUMBER OF ACCREDITATION 35/LE159.
- * 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.



ANNEX TO THE TEST REPORT

ADHESION ON WET SURFACES, REPORT N° CN21070113

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant ⁽¹⁾	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
1.1.2	Manufacturer ⁽¹⁾	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Snow
1.1.5	Traction tyre	: Yes
1.1.6	Brand name / Trade mark	: MAXELL
1.1.7	Trade description / Commercial name	: SUPER LD2
1.1.8	Tyre size	: 315/80R22.5 156/150L(154/150M)
1.1.9	Load index / Corresponding mass Q _r [kg]	: 156 / 4,000
1.1.10	Tyre structure	: Radial
1.1.11	Date code, other manufacturer markings	: 0521, 026BEMXMX
1.1.12	Reference inflation pressure [kPa]	: 850

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

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1.1.13 Test tyre internal reference :

Front left	Front right
CN-2106/03404-01	CN-2106/03404-02
Rear left	Rear right
CN-2106/03404-03	CN-2106/03404-04

1.1.14 Test rim : 9.00 x 22.5

1.1.15 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

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

1.1.17 SRTT internal reference :

Front left	Front right
CN-2010/03720-01	CN-2010/03720-02
Rear left	Rear right
CN-2010/03720-03	CN-2010/03720-04

1.1.18 Test SRTT rim : 9.00 x 22.5

1.1.19 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

1.1.20 Test tyre load [kg] :

SRTT 1			Candidate tyre			SRTT 2		
FL	3,248	86.6% Qr	FL	3,280	82.0% Qr	FL	3,256	86.8% Qr
FR	3,158	84.2% Qr	FR	3,156	78.9% Qr	FR	3,142	83.8% Qr
RL	3,248	86.6% Qr	RL	3,258	81.5% Qr	RL	3,248	86.6% Qr
RR	3,258	86.9% Qr	RR	3,280	82.0% Qr	RR	3,246	86.6% 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	752	726	752	755
SRTT 2	754	721	752	751

- 1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	3,280	4,000	1- If Q _t < 75% Q _r then: $P_t = (0.7) \times P_r$	1	663
FR	3,156	4,000		1	632
RL	3,258	4,000	2- If Q _t ≥ 75% Q _r then: $P_t = P_r \times (Q_t / Q_r)^{1.25}$	1	658
RR	3,280	4,000		1	663

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

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2. TEST TRACK

- 2.1. Location : Straight line braking B, ICPG
- 2.2. Date of check on compliance of the test surface : April 1st 2021
- 2.3. Test track characteristics:
- 2.3.1 Texture depth [mm] : 0.84
- 2.3.2 BPN : 57
- 2.3.3 Water depth [mm] : Average of 1.06
- 2.4. Test method : Vehicle
- 2.5. Air temperature T_a [°C] : 26.6
- 2.6. Wet surface temperature T_w [°C] :
- $5.0 \leq T_w \leq 35.0$

SRTT 1	Candidate tyre	SRTT 2
26.5	27.4	26.8

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	25.45	4.85	23.40	5.28	23.29	5.30
2	24.76	4.99	22.96	5.38	23.57	5.24
3	25.24	4.89	23.70	5.21	23.78	5.19
4	-	-	23.57	5.24	-	-
5	-	-	23.89	5.17	-	-
6	-	-	23.31	5.30	-	-

Coefficient of variation

SRTT 1	Candidate tyre	SRTT 2
1.41	1.39	1.05
< 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	---	4.91 m/s ²	---	> 600
2	60 - 20	S - N	---	315/80R22.5	5.26 m/s ²	1.05	> 600
4	60 - 20	S - N	315/70R22.5	---	5.24 m/s ²	---	> 600

Wet grip index G = 1.05

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)				
Special	≥ 0.85 (≥ 0.94)				

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4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: ICPG, Zhaoyuan, China

Date of test: 07/07/2021

朱晨

Chen(Jacky) Zhu
HOMOLOGATION ENGINEER

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ANNEX 3

**REPORT N° CN21070660****UN/ECE REGULATION 117R02/12 RELATED TO ROLLING RESISTANCE**

Applicant : Wanli Tire Corporation Limited
3 Wanli Road Aotou Town, Conghua 510940
Guangzhou City, Guangdong Province
China (PRC)

Manufacturer : Wanli Tire Corporation Limited
3 Wanli Road Aotou Town, Conghua 510940
Guangzhou City, Guangdong Province
China (PRC)

Tyre class : C3

Category of use : Snow

Traction tyre : Yes

Brand name / Trade mark : MAXELL

Trade description/ Commercial name : SUPER LD2

Tyre size : 295/80R22.5 154/150L(152/148M)

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 30/07/2021

CONCLUSIONS: The tested samples presented by the manufacturer have been tested pursuant to the technical prescriptions with regard to “rolling resistance” according to ECE R117.02/12.
The characteristics of the tested samples are detailed in the annex to the test report.

Performed by:

Zhu Yuan
HOMOLOGATION ENGINEER

Revised by:

Josep Masip Gomez
DEPARTMENT MANAGER



ANNEX TO THE TEST REPORT

ROLLING RESISTANCE, REPORT N° CN21070660

1. TEST DATA

1.1. Test tyre details

1.1.1	Applicant	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
1.1.2	Manufacturer	: Wanli Tire Corporation Limited 3 Wanli Road Aotou Town, Conghua 510940 Guangzhou City, Guangdong Province China (PRC)
1.1.3	Tyre class	: C3
1.1.4	Category of use	: Snow
1.1.5	Traction tyre	: Yes
1.1.6	Brand name / Trade mark	: MAXELL
1.1.7	Trade description / Commercial name	: SUPER LD2
1.1.8	Tyre size	: 295/80R22.5
1.1.9	Load index / Corresponding mass Q_r [kg]	: 154 / 3,750
1.1.10	Tyre structure	: Radial
1.1.11	Date code, other manufacturer markings	: 0921, 026BFMXMX
1.1.12	Reference inflation pressure P_r [kPa]	: 850
1.1.13	Test tyre internal reference	: CN21070660
1.1.14	Test rim	: 9.00 x 22.5
1.1.15	Test rim internal reference	: RIM 9.00 x 22.5
1.1.16	Test rim material	: Steel

Validate this report with the security code «7KLZQOLD» at: <https://extranet.idiada.com/hom-cve>

CN24021075





1.2. Test machine data

1.2.1 Identification : TJR-RR-TB(Y)

1.2.2 Drum diameter [mm] : 1,707

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 (L: 120 km/h and higher and load symbol > to 121)

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 154 / 3,750

1.3.4 Test load [kg / N] : 3,188 / 31,259

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] : 850

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] : 0.491

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.522

1.3.8 Ambient temperature T_{am} [$^{\circ}\text{C}$] : 23.10

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

FULFILS/NOT FULFILS

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1.3.9 Skim test load [N] : 397.75

$C3 \leq 500 \text{ N}$

FULFILS/NOT FULFILS

1.3.10 Spindle force (Ft) [N] : 44.379

1.3.11 Spindle force during skim test (Ft) [N] : 0.556

1.3.12 Parasitic loss (Fpl) [N] : 0.894

1.3.13 Rolling resistance (Fr) [N] : 188.414

2. TEST RESULTS

2.1. Rolling resistance coefficient

2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 6.027

2.1.2 Temperature corrected value [N/kN] : 5.968

2.1.3 Temperature and drum diameter corrected value [N/kN] : 5.80

Rolling resistance coefficient C_r [N/kN] = 5.80

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.



3. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Beijing, China

Date of test: 12/07/2021

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Zhu Yuan
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