

THE NETHERLANDS
(N E D E R L A N D)

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- ~~approval withdrawn~~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 ⁽²⁾: E4*117R02/12*8559*08

Suffix(es) ⁽³⁾: 02S2WR2

- | | | |
|------|---|---|
| 1. | Manufacturer's name and address | : ZODO TIRE Co., LIMITED
The South of Yalujiang Road, Wenzhuang
Village Qinghe Agency of Cao County Heze
City, Shandong Province 274400 China(PRC) |
| 2. | If applicable, name and address of
manufacturer's representative | : N/A |
| 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. | Snow tyre for use in severe snow
conditions | : yes /no ⁽¹⁾ |
| 4.2. | Traction tyre | : yes /no ⁽¹⁾ |
| 5. | Tyre structure | : Radial ⁽¹⁾ |



- 6.1. Brand name(s)/trademark(s) of the type of tyre : GRENLANDER; CONSTANCY; ILINK; FRONWAY; SAILWIN; ARIVO; XBRI; LUXXAN; RHINO; TTYRE; CRYSTAL; ROCKBLADE; ROADMARCH; KANGS; ZMAX; XCENTWAY; ADERENZA; CONCEPTA
- 6.2. Trade description(s)/Commercial name(s) of the type of tyre : LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY; RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09; ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant 902; CARGOPLUS
7. Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity tests : IDIADA Automotive Technology, S.A.
L'Albornar, P.O. Box 20
43710 Santa Oliva (Tarragona), SPAIN
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: 72 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 item 7. of the test report in the appendix to Annex 5: 1.34 (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: 7.795 N/kN.
- 8.4. 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⁽⁴⁾ to Annex 7: N/A (Snow grip index) using the ~~brake on snow method~~⁽¹⁾, ~~spin traction method~~⁽¹⁾ or ~~acceleration method~~⁽¹⁾.
9. Number of report issued by that service : CN20030660;
CN20080488;
CN21010497
10. Date of report issued by that service : 15/03/2020;
27/08/2020;
18/01/2021
11. Reason(s) of extension (if applicable) : Addition of brand name and trade description;
Addition of new tyre sizes;
Upgrade of regulation supplement number(the upgrade will not influence the previous test results and there are no new tests required)
12. Any remarks : N/A



13. Place : Zoetermeer
14. Date : 27 January 2021
15. Signature :


D. de Vries



16. Annexed to this communication are:
- 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⁽⁵⁾.
- 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.

⁽²⁾ According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽³⁾ According to paragraphs 5.2.2. and 5.3.1.2. of this Regulation.

⁽⁴⁾ Appendix 2 for C1 and C2 tyres.

Appendix 3 for C3 tyres.

⁽⁵⁾ In the case of 'snow tyre for use in severe snow conditions' a test report according to Appendix 2 of Annex 7 shall be submitted.

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 12)

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
- 1.2. Manufacturer's name : ZODO TIRE CO., LIMITED
- 1.3. Name and address of applicant : The South of Yalujiang Road, Wenzhuang Village
Qinghe Agency of Cao County, Heze city,
Shandong Province 274400 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 : Brand names: GRENLANDER; CONSTANCY; ILINK; FRONWAY; SAILWIN; ARIVO; XBRI; LUXXAN; RHINO; TTYRE; CRYSTAL; ROCKBLADE; ROADMARCH; KANGS; ZMAX; XCENTWAY; ADERENZA; CONCEPTA
- Pattern names: LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY; RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09; ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant 902; CARGOPLUS

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
- 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 including "H") or "R" and above (including "H") in case of snow tyres for approval with regarding 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) : January 1, 2021

MANUFACTURER'S STAMP



Signature:

Ren Hailong

Name: Ren Hailong

THIS APPLICATION IS ACCOMPANIED BY:

CN21010497

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

List of tyre size

Brand name(s) or Trade mark(s) : GRENLANDER; CONSTANCY; ILINK; FRONWAY; SAILWIN; ARIVO; XBRI; LUXXAN; RHINO; TTYRE; CRYSTAL; ROCKBLADE; ROADMARCH; KANGS; ZMAX; XCENTWAY; ADERENZA; CONCEPTA

Tread pattern : LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY; RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09; ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant 902; CARGOPLUS

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
195R14C 106/104Q	E4-0030861	72dB(A)	0.95	9.0
195R15C 106/104Q	E4-0030862	72dB(A)	0.95	9.0
195/70R15C 104/102Q	E4-0030863	72dB(A)	0.95	9.0
195/75R16C 107/105Q	E4-0030864	72dB(A)	0.95	9.0
205/65R16C 107/105Q	E4-0030865	72dB(A)	0.95	9.0
175/65R14C 90/88R	E4-0035520	72dB(A)	0.95	9.0
235/65R16C 115/113R	E4-0035518	72dB(A)	0.95	9.0
225/65R16C 112/110R	E4-0035519	72dB(A)	0.95	9.0
215/65R16C 109/107R	E4-0035958	72dB(A)	0.95	9.0
185R14C 102/100Q	E4-0037704	72dB(A)	0.95	9.0
215/70R15C 104/101Q	E4-0037705	72dB(A)	0.95	9.0
165/70R14C 89/87R	E4-0037707	72dB(A)	0.95	9.0
195R14C 106/104R	E4-0035959	72dB(A)	0.95	9.0
175/75R16C 101/99R	E4-0037987	72dB(A)	0.95	9.0
215R14C 112/110R	E4-0037988	72dB(A)	0.95	9.0
205R14C 109/107R	E4-0037989	72dB(A)	0.95	9.0
185R14C 102/100R	E4-0043282	72dB(A)	0.95	9.0
195/70R15C 104/102R	E4-0043283	72dB(A)	0.95	9.0
195/75R16C 107/105R	E4-0043284	72dB(A)	0.95	9.0
195R15C 106/104R	E4-0037706	72dB(A)	0.95	9.0
205/65R16C 107/105R	E4-0043285	72dB(A)	0.95	9.0
215/70R15C 104/101R	E4-0043286	72dB(A)	0.95	9.0
205/70R15C 106/104R	E4-0046039	72dB(A)	0.95	9.0
215/65R15C 104/102R	E4-0046041	72dB(A)	0.95	9.0
225/70R15C 112/110R	E4-0046043	72dB(A)	0.95	9.0
205/75R16C 110/108R	E4-0046042	72dB(A)	0.95	9.0
215/60R16C 103/101T	E4-0046040	72dB(A)	0.95	9.0
195/60R16C 99/97T	E4-0046038	72dB(A)	0.95	9.0
185R15C 103/102R	E4-0046846	72dB(A)	0.95	9.0
205/75R14C 109/107R	E4-0046847	72dB(A)	0.95	9.0
215/75R14C 112/110R	E4-0046848	72dB(A)	0.95	9.0
215/70R16C 108/106R	E4-0046849	72dB(A)	0.95	9.0
<u>205/75R15C 109/107R</u>	<u>E4-0047575</u>	<u>72dB(A)</u>	<u>0.95</u>	<u>9.0</u>
<u>225/75R16C 116/114R</u>	<u>E4-0047576</u>	<u>72dB(A)</u>	<u>0.95</u>	<u>9.0</u>
<u>215/60R17C 109/107T</u>	<u>E4-0047577</u>	<u>72dB(A)</u>	<u>0.95</u>	<u>9.0</u>

Worst Case Selection

Test size for rolling sound : 235/65R16C 115/113R

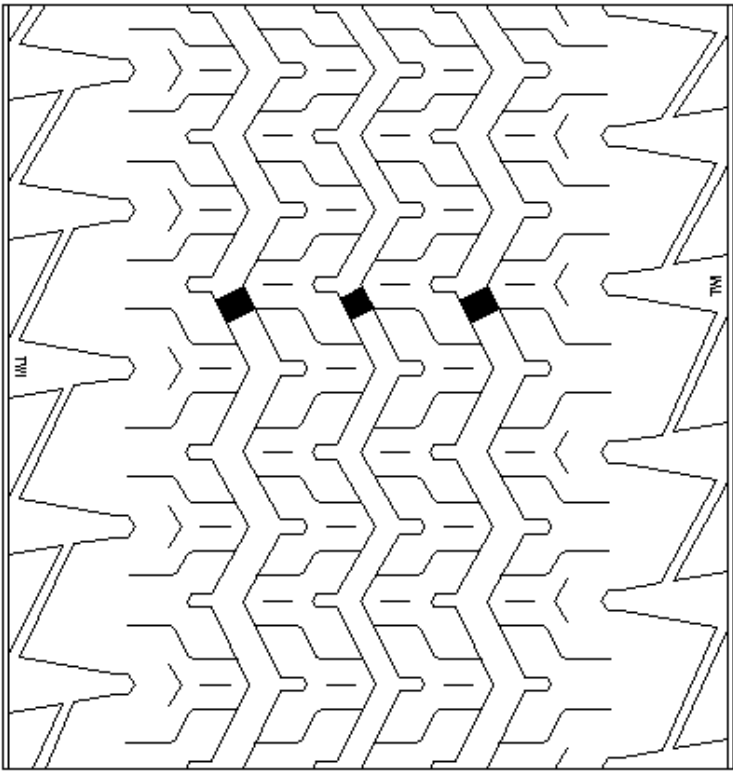
Because of : Widest

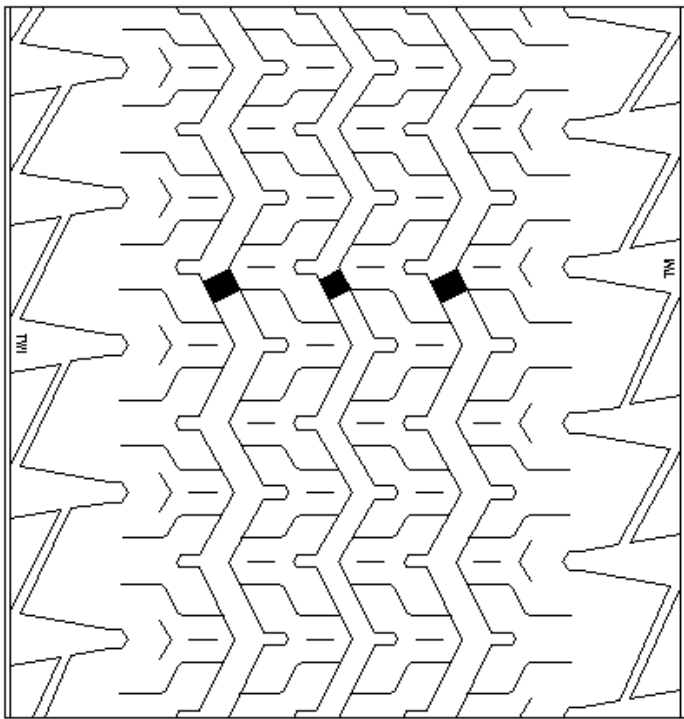
Test size for wet grip : 235/65R16C 115/113R

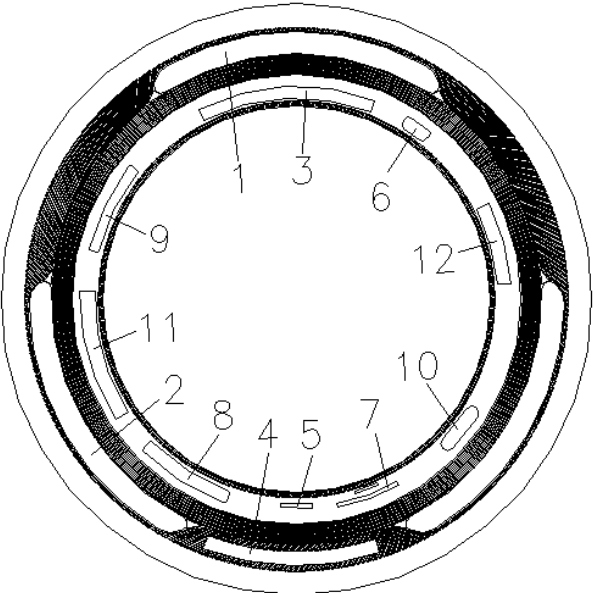
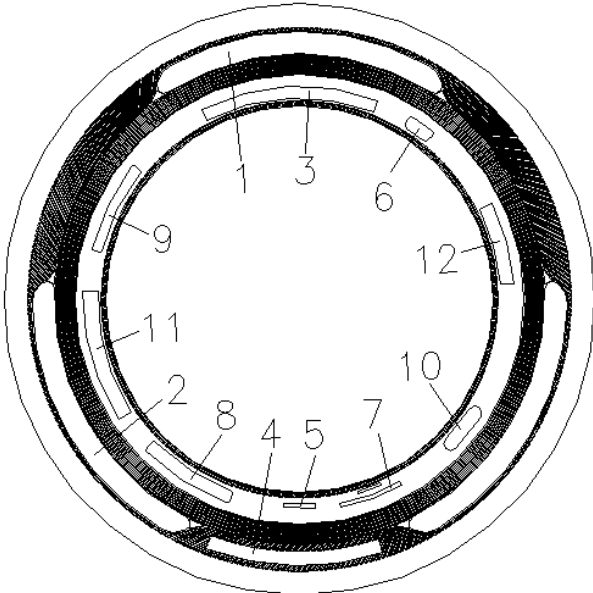
Because of : The wet grip test result of 235/65R16C is $G=1.049$, which is 110% above the limit of ECE R117(for normal use tyre, the 110% limit value is $G=1.045$)

Test size for rolling resistance : 165/70R14C 89/87R

Because of : Lowest load capacity index

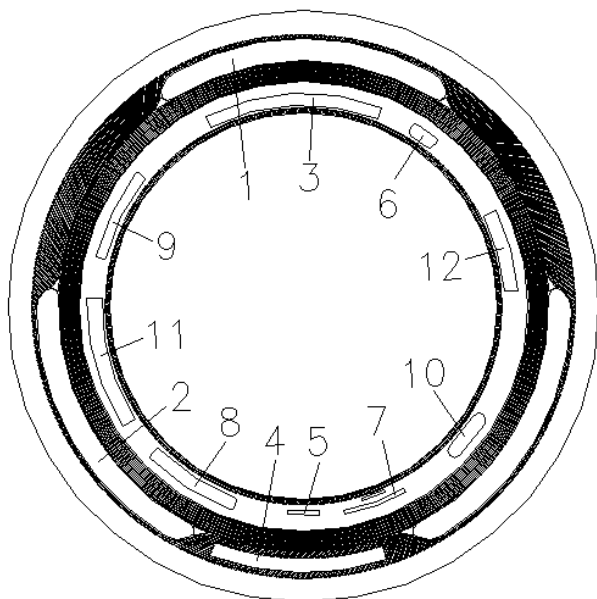
Drawing of the tread pattern (for measured tyre using for tyre noise and wet grip)		
Manufacturer name	:	ZODO TIRE Co., LIMITED
Pattern name	:	LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY; RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09; ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant 902; <u>CARGOPLUS</u>
Tyre Size	:	235/65R16C 115/113R
Market	:	EU/US
Pitch number	:	51
Pitch ratio	:	1.0/1.2/1.4
Void volume [%]	:	31.0
Width: main grooves [mm]	:	14.5/10.55/14.5
Depth: center groove [mm]	:	9
Depth: shoulder groove [mm]	:	9
Tyre tread pattern	:	

Drawing of the tread pattern (for measured tyre using for tyre rolling resistance test)	
Manufacturer name	: ZODO TIRE Co., LIMITED
Pattern name	: LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY; RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09; ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant 902; <u>CARGOPLUS</u>
Tyre Size	: 165/70R14C 89/87R
Market	: EU/US
Pitch number	: 51
Pitch ratio	: 1.0/1.2/1.4
Void volume [%]	: 31.3
Width: main grooves [mm]	: 10.6/7.6/10.6
Depth: center groove [mm]	: 8.5
Depth: shoulder groove [mm]	: 8.5
Tyre mass [kg]	: 8.1
Tread depth [mm]	: 8.2
Tread width [mm]	: 170
Curvature radius of tread crown [mm]	: 360
Tyre outer diameter [mm]	: 588
Tread plies	: 2Polyester + 2 Steel
Tyre tread pattern	: 

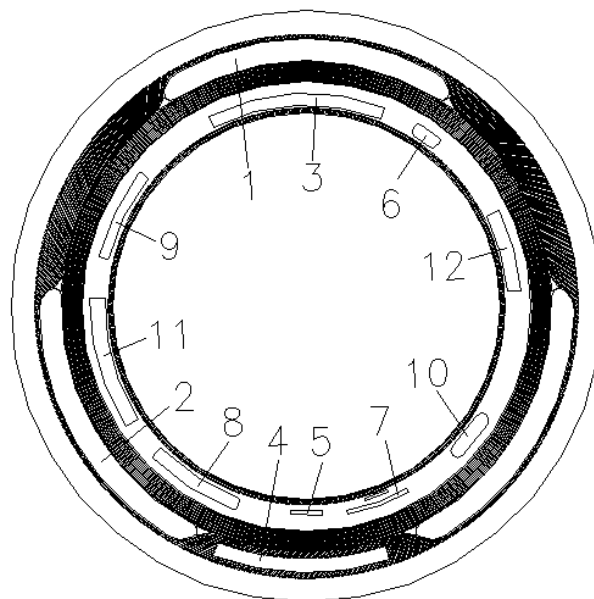
Drawing of the tyre sidewall Tyre Size : 235/65R16C 115/113R	
	
Upper mold	Lower mold
1. CONSTANCY	1. CONSTANCY
2.LY399	2.LY399
3. 235/65R16C 115/113R	3.235/65R16C 115/113R
4. SAFETY WARNING	4. SAFETY WARNING
5. MADE IN CHINA	5. MADE IN CHINA
6. RADIAL TUBELESS STEEL BELTED	6. RADIAL TUBELESS STEEL BELTED
7. STANDARD RIM : 7J	7. STANDARD RIM : 7J
8. PLIES : SIDEWALL 2 POLYESTER TREAD : 2 POLYESTER + 2 STEEL + 1 NYLON	8.PLIES : SIDEWALL 2 POLYESTER TREAD : 2 POLYESTER + 2 STEEL + 1 NYLON
9.  0035518	9.  0035518
10. MAX .LOAD SINGLE 1215 KG(2679 LBS) AT 475 KPA (69 PSI) COLD MAX .LOAD DUAL 1150 KG(2535 LBS) AT 475 KPA (69 PSI) COLD	10. MAX .LOAD SINGLE 1215 KG(2679 LBS) AT 475 KPA (69 PSI) COLD MAX .LOAD DUAL 1150 KG(2535 LBS) AT 475 KPA (69 PSI) COLD
11. DOT 7BH4 BT5	11. DOT 7BH4 BT5 XXXX(DATE CODE)

Tyre Size

: 165/70R14C 89/87R



Upper mold



Lower mold

1. CONSTANCY	1. CONSTANCY
2.LY399	2.LY399
3.165/70R14C 89/87R	3.165/70R14C 89/87R
4. SAFETY WARNING	4. SAFETY WARNING
5. MADE IN CHINA	5. MADE IN CHINA
6. RADIAL TUBELESS STEEL BELTED	6. RADIAL TUBELESS STEEL BELTED
7. STANDARD RIM : 5J	7. STANDARD RIM : 5J
8. PLIES : SIDEWALL2 POLYESTER TREAD : 2 POLYESTER + 2 STEEL	8.PLIES : SIDEWALL 2 POLYESTER TREAD : 2 POLYESTER + 2 STEEL
9E4 0037707	9E4 0037707
10.MAX .LOAD SINGLE 580 KG(1279 LBS) AT 375 KPA (54 PSI) COLD MAX .LOAD DUAL 545 KG(1202 LBS) AT 375 KPA (54 PSI) COLD	10. MAX .LOAD SINGLE 580 KG(1279 LBS) AT 375 KPA (54 PSI) COLD MAX .LOAD DUAL 545 KG(1202 LBS) AT 375 KPA (54 PSI) COLD
11. DOT 7BH6 BT5	11. DOT 7BH6 BT5 XXXX(DATE CODE)

REPORT Nº CN21010497

UN/ECE REGULATION 117R02 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET SURFACES AND ROLLING RESISTANCE

Approval number : E4*117R02/12*8559*08
Approved performances : 02S2WR2

Applicant : ZODO TIRE Co., LIMITED
The South of Yalujiang Road, Wenzhuang Village Qinghe
Agency of Cao County, Heze city, Shandong Province
274400 China (PRC)

Manufacturer : ZODO TIRE Co., LIMITED
The South of Yalujiang Road, Wenzhuang Village Qinghe
Agency of Cao County, Heze city, Shandong Province
274400 China (PRC)

Tyre class : C2

Category of use : Normal

Traction tyre : No

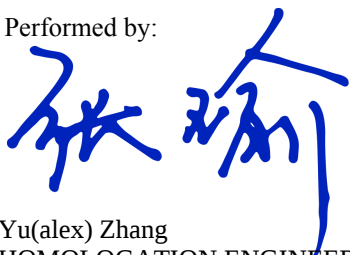
Brand name / Trade mark : GRENLANDER; CONSTANCY; ILINK; FRONWAY;
SAILWIN; ARIVO; XBRI; LUXXAN; RHINO; TTYRE;
CRYSTAL; ROCKBLADE; ROADMARCH; KANGS;
ZMAX; XCENTWAY; ADERENZA; CONCEPTA

Trade description/ Commercial name : LY399; L-MAX9; TRANSITO ARZ6-X; TWENTY;
RT28; INSPIRER L4; VANPLUS 09; VANTOUR 09;
ROCK 838C; PRIMEVAN 9; MAXCELL 09; Perseverant
902; CARGOPLUS

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 18/01/2021

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” pursuant to UN/ECE REGULATION No. 117 supplement 12 to the 02 series of amendments.
The characteristics of the tested samples are detailed in the annexes to the test report.

Performed by:



Yu(alex) Zhang
HOMOLOGATION ENGINEER

Revised by:



Josep Masip Gomez
DEPARTMENT MANAGER

REPORT N° CN21010497

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 : 235/65R16C 115/113R (largest section width)
See type approval E4-117R-028559 S2WR1 Ext.00, Test report 86-R117-3037/16-00, TÜV Rheinland Kraftfahrt GmbH, 25/10/2016
 - 2.2. Tyre size tested for adhesion on wet surfaces: 235/65R16C 115/113R (meets extra 10%)
See Annex 1, Test report CN19030863, IDIADA, 29/03/2019
 - 2.3. Tyre tested for rolling resistance : 165/70R14C 89/87R (lowest load index)
See type approval E4-117R-028559 S2WR2 Ext.01, Test report 17-00408-CX-SHA-00, TÜV SÜD Auto Service GmbH, 17/04/2017
3. Reason(s) of extension (if applicable) :
 - Addition of brand name and trade description
 - Addition of new tyre sizes
 - Upgrade of regulation supplement number(the upgrade will not influence the previous test results and there are no new tests required)
4. New limit value according to Announcement for the technical service 2018-01

In case a test tyre is selected which does not have the worst case properties the following applies:

A test tyre, not having the worst case properties, performing at least ten percent ($\geq 10\%$) above the minimum required wet grip performance level can represent the whole tyre size range of tyre types

New limit value is $1.045 < 1.34$ (Wet grip test result)
5. List of Annexes to this report
 - 5.1. Annex: Manufacturer's technical documentation.

Place and date of issue: L'Albornar, Santa Oliva (Tarragona), 18/01/2021



Yu(alex) Zhang
HOMOLOGATION ENGINEER

ANNEX TO THE TEST REPORT
ADHESION ON WET SURFACES, REPORT N° CN19030863

1. TEST DATA

1.1. Test tyre details

- 1.1.1 Applicant : ZODO TIRE Co., LIMITED
The South of Yalujiang Road, Wenzhuang Village Qinghe
Agency of Cao County, Heze city, Shandong Province
274400 China (PRC)
- 1.1.2 Manufacturer : ZODO TIRE Co., LIMITED
The South of Yalujiang Road, Wenzhuang Village Qinghe
Agency of Cao County, Heze city, Shandong Province
274400 China (PRC)
- 1.1.3 Tyre class : C2
- 1.1.4 Category of use : Normal
- 1.1.5 Traction tyre : No
- 1.1.6 Brand name / Trade mark : GRENLANDER
- 1.1.7 Trade description / Commercial name : L-MAX9
- 1.1.8 Tyre size : 235/65R16C 115/113R
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 115 /1,215
- 1.1.10 Tyre structure : Radial
- 1.1.11 Date code, other manufacturer markings : 0319, 7BH4 BT5
- 1.1.12 Reference inflation pressure P_r [kPa] : 475
- 1.1.13 Test tyre internal reference :

Front left	Front right
CN19030863-1	CN19030863-2

Rear left	Rear right
CN19030863-3	CN19030863-4

- 1.1.14 Test rim : 7 x 16

- 1.1.15 Test rim internal reference :

Front left	Front right
RIM7X16-1	RIM7X16-2

Rear left	Rear right
RIM7X16-3	RIM7X16-4

1.1.16 SRTT identification : MICHELIN 225/75 R16C - ASTM F 2872

1.1.17 SRTT internal reference :

Front left	Front right
BW-FG-093	BW-FG-096

Rear left	Rear right
BW-FG-095	BW-FG-094

1.1.18 Test SRTT rim : 6.00 x 16

1.1.19 Test SRTT rim internal reference :

Front left	Front right
G-B177	G-B178

Rear left	Rear right
G-B179	G-B180

1.1.20 Test tyre load [kg] :

SRTT 1			Candidate tyre			SRTT 2		
FL	756	60.5% Q _r	FL	760	62.6% Q _r	FL	762	61.0% Q _r
FR	776	62.1% Q _r	FR	774	63.7% Q _r	FR	778	62.2% Q _r
RL	776	62.1% Q _r	RL	768	63.2% Q _r	RL	772	61.8% Q _r
RR	780	62.4% Q _r	RR	778	64.0% Q _r	RR	778	62.2% Q _r

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 : GreatWall

1.2.2 Model : Wingle6

1.2.3 Year : 2014

1.2.4 Transmission : Manual

1.2.5 Wheelbase [mm] : 3,200

1.2.6 Vehicle internal reference : CPG-007

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

* 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.

1.3. Test inflation pressure

1.3.1 SRTT inflation pressure [kPa] :

	FL	FR	RL	RR
SRTT 1	333	333	333	333
SRTT 2	333	333	333	333

1.3.2 Candidate inflation pressure :

Candidate	Q _t [kg]	Q _r [kg]	Conditions	Cond. Used	Inflation pressure P _t [kPa]
FL	760	1,215	1- If Q _t < 75% Q _r then: P_t = (0.7) x P_r	1	333
FR	774	1,215		1	333
RL	768	1,215		1	333
RR	778	1,215	2- If Q _t ≥ 75% Q _r then: P_t = P_r x (Q_t / Q_r)^{1.25}	1	333

1.4. Test equipments

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 14th 2017

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] : 13.2

2.6. Wet surface temperature T_w [°C] :

$$5.0 \leq T_w \leq 35.0$$

SRTT 1	Candidate tyre	SRTT 2
13.5	12.8	13.2

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	22.64	5.45	17.13	7.21	23.21	5.32
2	23.08	5.35	17.40	7.10	23.51	5.25
3	23.13	5.34	18.09	6.82	23.63	5.22
4	-	-	17.31	7.13	-	-
5	-	-	17.37	7.11	-	-
6	-	-	17.06	7.24	-	-

Coefficient of variation

SRTT 1	Candidate tyre	SRTT 2
1.18	2.06	0.93
< 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	225/75R16C	---	5.38 m/s ²	---	> 600
3	60 - 20	N - S	---	235/65R16C	7.10 m/s ²	1.34	> 600
5	60 - 20	N - S	225/75R16C	---	5.26 m/s ²	---	> 600

Wet grip index G = 1.34

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	≥ 0.65 (≥ 0.72)			
Special	≥ 0.85 (≥ 0.94)			

4. TEST TYRE PICTURES



Picture 1. Sidewall



Picture 2. Tread pattern

Place of test: Yancheng, China

Date of test: 21/03/2019



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