

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- ~~approval withdrawn~~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*10765*02**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 : ~~Diagonal~~ / ~~Bias-belted~~ / Radial / ~~Run-flat tyre~~ ⁽¹⁾
6. Tyre type designation :

- 6.1. Brand name(s)/trademark(s) of the type of tyre : GRENLANDER;CONSTANCY; ILINK; FRONWAY; SAILWIN; ARIVO; XBRI; LUXKAN; RHINO; T TYRE; CRYSTAL; ROCKBLADE;ROADMARCH; KANGS; ZMAX;XCENTWAY; ADERENZA; CONCEPTA
- 6.2. Trade description(s)/Commercial name(s) of the type of tyre : Winter GL989; Winter IL989; ICEPOWER 989; ICEWINNER 989; WINMASTER ARW6; ROCK 989S; THIRTY; SNOWROVER 989; INSPIRER W22; ICEPIONEER 989
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: 1.12 (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 7.72 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: 1.42 (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 : CS117-A0-2019-00647;
CN20080856;
CN21040463
10. Date of report issued by that service : 13/05/2019;
27/08/2020;
14/04/2021
11. Reason(s) of extension (if applicable) : Upgrade of regulation supplement number (the upgrade will not influence the previous test results);
Addition of tyre size designation;
Addition of brand names;
12. Any remarks :



13. Place : Zoetermeer
14. Date : 28 April 2021
15. Signature :


Uwe Löbig



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)

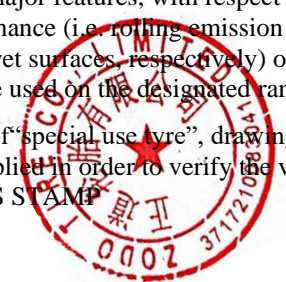
1. GENERAL

- 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 and snow performance level of snow tyre for use in severe snow conditions
- 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 name : GRENLANDER;CONSTANCY; ILINK; FRONWAY; SAILWIN; ARIVO; XBRI; LUXXAN; RHINO; T TYRE; CRYSTAL; ROCKBLADE;ROADMARCH; KANGS; ZMAX;XCENTWAY; ADERENZA; CONCEPTA;
Tread pattern: Winter GL989;Winter IL989; ICEPOWER 989;ICEWINNER 989; WINMASTER ARW6;ROCK 989S; THIRTY;SNOWROVER 989; INSPIRER W22;ICEPIONEER 989

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 :
- 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

MANUFACTURER'S STAMP



Signature :

..... Ren Hailong

Name: Ren Hailong

THIS APPLICATION IS ACCOMPANIED BY:

IDIADA CN21040463

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

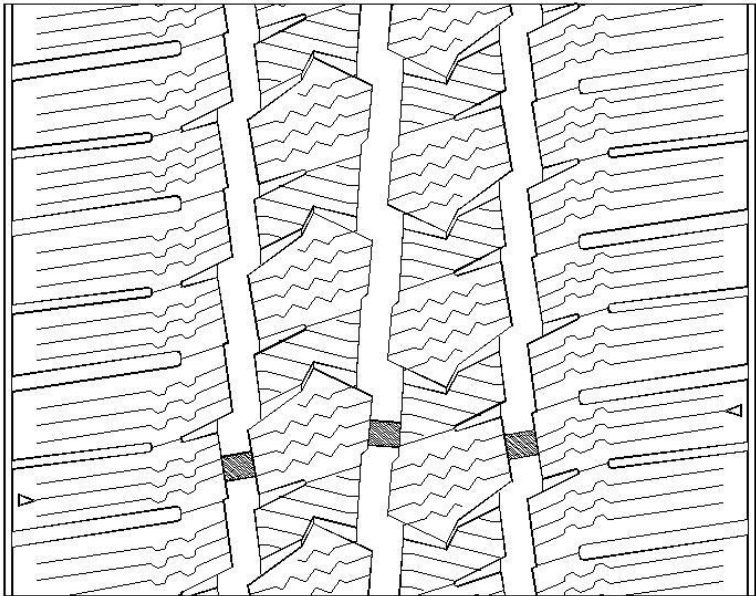
List of tyre size

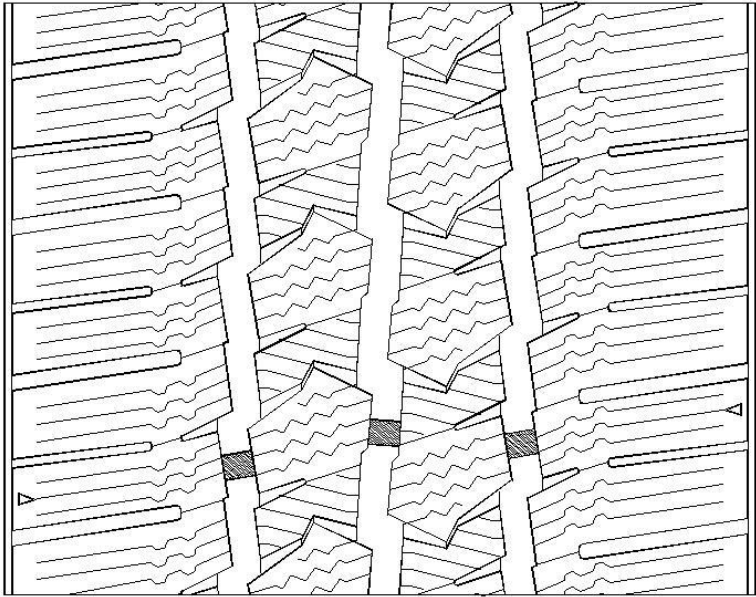
Brand name(s) or Trade mark(s) : GRENLANDER;CONSTANCY; ILINK; FRONWAY; SAILWIN;
ARIVO; XBRI; LUXKAN; RHINO; T TYRE; CRYSTAL;
ROCKBLADE;ROADMARCH; KANGS;
ZMAX;XCENTWAY;ADERENZA;CONCEPTA;

Tread pattern : Winter GL989;Winter IL989;ICEPOWER 989;ICEWINNER 989;
WINMASTER ARW6;ROCK 989S;THIRTY;SNOWROVER 989;
INSPIRER W22;ICEPIONEER 989;

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
235/65R16C 115/113R	E4-0043564	73 dB(A)	0.85	10.0
185/75R16C 104/102R	E4-0043553	73 dB(A)	0.85	10.0
195/75R16C 107/105R	E4-0043556	73 dB(A)	0.85	10.0
205/75R16C 113/111R	E4-0043574	73 dB(A)	0.85	10.0
215/75R16C 113/111R	E4-0043561	73 dB(A)	0.85	10.0
225/75R16C 121/120R	E4-0043582	73 dB(A)	0.85	10.0
175/70R14C 95/93T	E4-0043566	73 dB(A)	0.85	10.0
195/70R15C 104/102R	E4-0043555	73 dB(A)	0.85	10.0
205/70R15C 106/104R	E4-0043573	73 dB(A)	0.85	10.0
215/70R15C 109/107R	E4-0043560	73 dB(A)	0.85	10.0
225/70R15C 112/110R	E4-0043563	73 dB(A)	0.85	10.0
215/65R15C 104/102R	E4-0043558	73 dB(A)	0.85	10.0
195/65R16C 104/102R	E4-0043554	73 dB(A)	0.85	10.0
195/65R16C 104/102T	E4-0043569	73 dB(A)	0.85	10.0
205/65R16C 107/105R	E4-0043557	73 dB(A)	0.85	10.0
205/65R16C 107/105T	E4-0043572	73 dB(A)	0.85	10.0
215/65R16C 109/107R	E4-0043559	73 dB(A)	0.85	10.0
215/65R16C 109/107T	E4-0043577	73 dB(A)	0.85	10.0
225/65R16C 112/110R	E4-0043562	73 dB(A)	0.85	10.0
195/60R16C 99/97H	E4-0043568	73 dB(A)	0.85	10.0
215/60R16C 103/101T	E4-0043575	73 dB(A)	0.85	10.0
215/60R17C 109/107T	E4-0043576	73 dB(A)	0.85	10.0
175R14C 99/97R	E4-0046844	73 dB(A)	0.85	10.0
185R14C 102/100R	E4-0046845	73 dB(A)	0.85	10.0
<u>165/70R14C 89/87R</u>	<u>E4-0047580</u>	<u>73 dB(A)</u>	<u>0.85</u>	<u>10.0</u>
<u>175/65R14C 90/88T</u>	<u>E4-0043565</u>	<u>73 dB(A)</u>	<u>0.85</u>	<u>10.0</u>
<u>175/75R16C 98/96R</u>	<u>E4-0047581</u>	<u>73 dB(A)</u>	<u>0.85</u>	<u>10.0</u>
<u>205/75R16C 110/108R</u>	<u>E4-0047582</u>	<u>73 dB(A)</u>	<u>0.85</u>	<u>10.0</u>
<u>225/75R16C 116/114R</u>	<u>E4-0047583</u>	<u>73 dB(A)</u>	<u>0.85</u>	<u>10.0</u>

Worst Case Selection	
Representative tyre size for rolling sound emission	235/65R16C 115/113R
Worst Case Criteria for rolling sound emission	Widest
Representative tyre size for wet grip	235/65R16C 115/113R
Worst Case Criteria for wet grip	The wet grip test result of 235/65R16C 115/113R is G=1.12, which is 110% above the limit value of ECE-R117 (for snow tyre for us, the 110% limit value is G=0.935)
Representative tyre size for snow grip	235/65R16C 115/113R
Worst Case Criteria for snow grip	The largest nominal section
Representative tyre size for rolling resistance	165/70R14C 89/87R
Worst Case Criteria for rolling resistance	Lowest load index
Representative tyre size for snow grip	235/65R16C 115/113R
Worst Case Criteria for snow grip	The largest nominal section

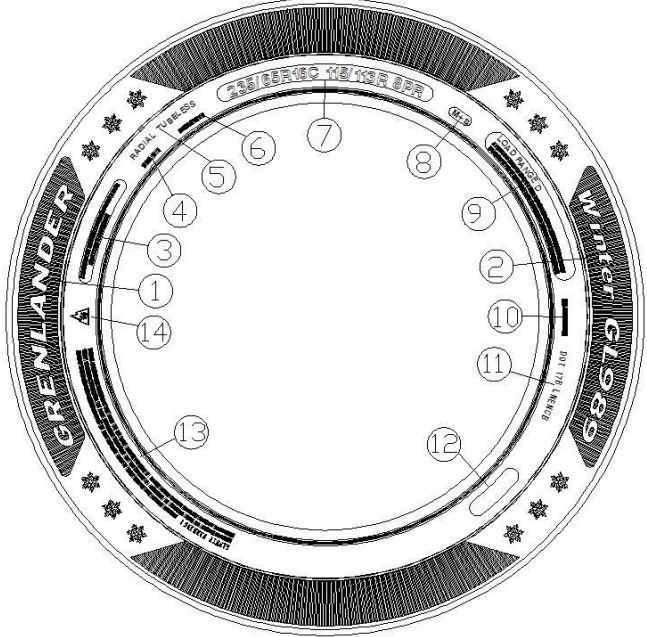
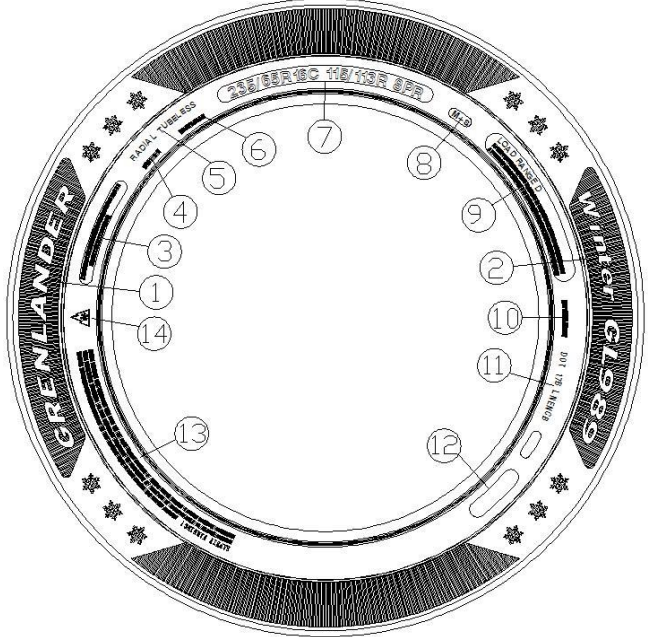


Drawing of the tread pattern (for measured tyre using for tyre noise and wet grip and snow grip)	
Manufacturer name	: ZODO TIRE Co., LIMITED
Pattern name	: Winter GL989; Winter IL989; ICEPOWER 989; ICEWINNER 989; WINMASTER ARW6; ROCK989S; THIRTY; SNOWROVER 989; INSPIRER W22; ICEPIONEER 989;
Tyre Size	: 235/65R16C 115/113R
Market	: EU/US
Pitch number	: 37
Pitch ratio	: 0.71/1/1.16
Void volume [%]	: 22
Width: main grooves [mm]	: 11.3/11.6/11.4
Depth: center groove [mm]	: 8.8
Depth: shoulder groove [mm]	: 8.8
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	: Winter GL989; Winter IL989; ICEPOWER 989; ICEWINNER 989; WINMASTER ARW6; ROCK 989S; THIRTY; SNOWROVER 989; INSPIRER W22; ICEPIONEER 989;
Tyre Size	: 165/70R14C 89/87R
Market	: EU/US
Pitch number	: 36
Pitch ratio	: 0.85/1/1.15
Void volume [%]	: 22
Width: main grooves [mm]	: 8/8.1/8
Depth: center groove [mm]	: 8.2
Depth: shoulder groove [mm]	: 7.6
Tyre mass [kg]	:
Tread depth [mm]	: 8.2
Tread width [mm]	: 122
Curvature radius of tread crown [mm]	: 350
Tyre outer diameter [mm]	: 584
Tread plies	: 2POLYESTER + 2 STEEL + 1NYLON
Tyre tread pattern	: 

Drawing of the tyre sidewall

Tyre Size

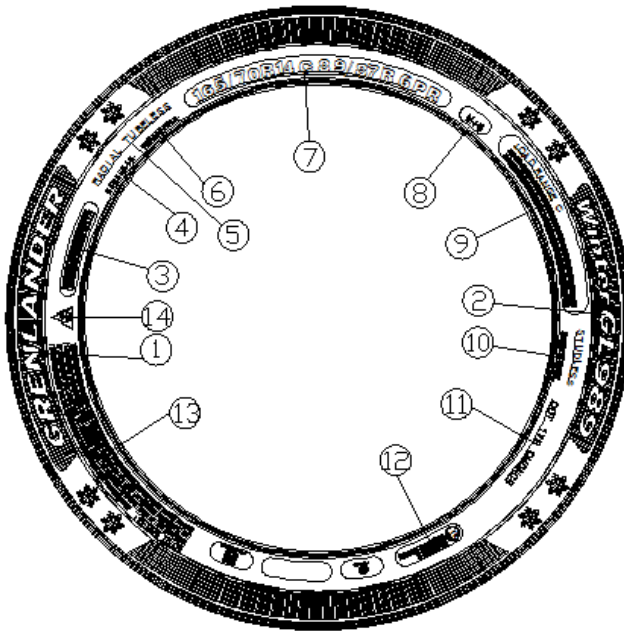
: 235/65R16C 115/113R

 <p style="text-align: center;">Upper mold</p>	 <p style="text-align: center;">Lower mold</p>
1. GRENLANDER	1. GRENLANDER
2. Winter GL989	2. Winter GL989
3. PLYES:TREAD 2POLYESTER+2STEEL+1NYLON SIDEWALL 2POLYESTER	3. PLYES:TREAD 2POLYESTER+2STEEL+1NYLON SIDEWALL 2POLYESTER
4. RIM:7J	4. RIM:7J
5. RADIAL TUBELESS	5. RADIAL TUBELESS
6. MOLD NO.	6. MOLD NO.
7. 235/65R16C 115/113R 8PR	7. 235/65R16C 115/113R 8PR
8. M+S	8. M+S
9. LOAD RANGE D MAX. LOAD SINGLE 1215kg (2679 LBS) AT 475kPa (69 PSI) MAX.PRESS. MAX. LOAD DUAL 1150kg (2535 LBS) AT 475kPa (69 PSI) MAX.PRESS.	9. LOAD RANGE D MAX. LOAD SINGLE 1215kg (2679 LBS) AT 475kPa (69 PSI) MAX.PRESS. MAX. LOAD DUAL 1150kg (2535 LBS) AT 475kPa (69 PSI) MAX.PRESS.
10. MADE IN CHINA	10. MADE IN CHINA
11. DOT 17B LNENCB	11. DOT 17B LNENCB XXXX(DATE CODE)
12. (E4)XXXXXXX	12. (E4)XXXXXXX
13. SAFETY WARNING	13. SAFETY WARNING
14. 	14. 

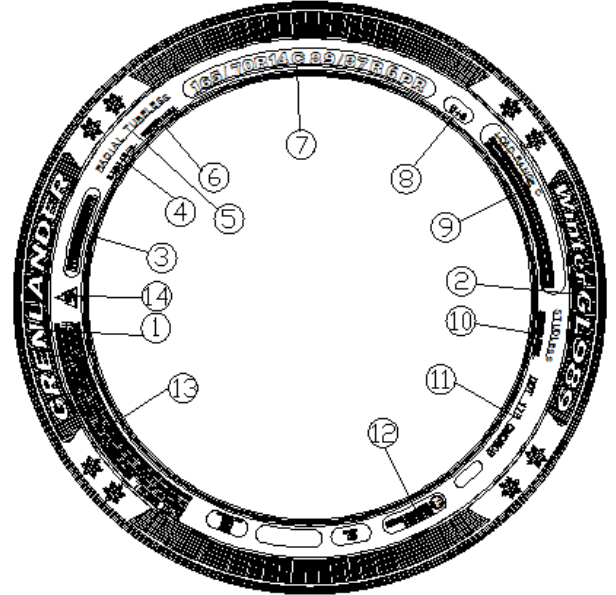
Drawing of the tyre sidewall

Tyre Size

: 165/70R14C 89/87R



Upper mold



Lower mold

1. GRENLANDER	1. GRENLANDER
2. Winter GL989	2. Winter GL989
3. PLYES:TREAD 2POLYESTER+2STEEL+1NYLON SIDEWALL 2POLYESTER	3. PLYES:TREAD 2POLYESTER+2STEEL+1NYLON SIDEWALL 2POLYESTER
4. RIM:5J	4. RIM:5J
5. RADIAL TUBELESS	5. RADIAL TUBELESS
6. MOLD NO.	6. MOLD NO.
7. 165/70R14C 89/87R 6PR	7. 165/70R14C 89/87R 6PR
8. M+S	8. M+S
9. LOAD RANGE C MAX. LOAD SINGLE 580kg (1279 LBS) AT 375kPa (54 PSI) MAX.PRESS. MAX. LOAD DUAL 545kg (1202 LBS) AT 375kPa (54 PSI) MAX.PRESS.	9. LOAD RANGE C MAX. LOAD SINGLE 580kg (1279 LBS) AT 375kPa (54 PSI) MAX.PRESS. MAX. LOAD DUAL 545kg (1202 LBS) AT 375kPa (54 PSI) MAX.PRESS.
10. MADE IN CHINA	10. MADE IN CHINA
11. DOT 17B CMCNCB	11. DOT 17B CMCNCB XXXX(DATE CODE)
12. (E4) XXXXXXX	12. (E4) XXXXXXX
13. SAFETY WARNING	13. SAFETY WARNING
14.	14.

REPORT N° CN21040463**UN/ECE REGULATION 117R02 RELATED TO ROLLING SOUND EMISSIONS, ADHESION ON WET SURFACES AND ROLLING RESISTANCE**

Approval number : E4*117R02/12*10765*02
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 : Snow (for use in severe snow conditions)

Traction tyre : No

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

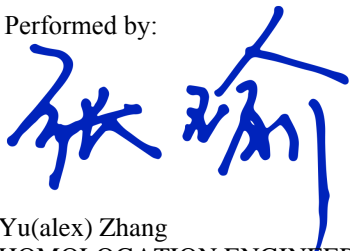
Trade description/ Commercial name : Winter GL989; Winter IL989; ICEPOWER 989;
ICEWINNER 989; WINMASTER ARW6; ROCK 989S;
THIRTY; SNOWROVER 989; INSPIRER W22;
ICEPIONEER 989

Place and date of issue : L'Albornar, Santa Oliva (Tarragona), 14/04/2021

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° CN21040463

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*117R02/09*10765*00, Test report CS117-A0-2019-00647, TUV NORD Mobilita GmbH & Co. KG, 19/03/2019
 - 2.2. Tyre size tested for adhesion on wet surfaces: 235/65R16C 115/113R (meets extra 10%)
See type approval E4*117R02/09*10765*00, Test report CS117-A0-2019-00647, TUV NORD Mobilita GmbH & Co. KG, 20/03/2019
 - 2.3. Tyre size tested for rolling resistance : 165/70R14C 89/87R (Lowest load index)
See Annex 1, Test report CN21030951, IDIADA, 26/02/2021
 - 2.4. Tyre size tested for snow grip : 235/65R16C 115/113R (largest section width)
See type approval E4*117R02/09*10765*00, Test report CS117-A0-2019-00647, TUV NORD Mobilita GmbH & Co. KG, 15-16/01/2019
3. Reason(s) of extension (if applicable) :
 - Addition of brand names;
 - Addition of tyre size designation;
 - Upgrade of regulation supplement number(the upgrade will not influence the previous test results);
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 $0.935 < 1.12$ (Wet grip test result)
5. List of Annexes to this report
 - 5.1. Annex 1: Test report according to rolling resistance.
 - 5.2. Annex: Manufacturer's technical documentation.

Place and date of issue: L'Albornar, Santa Oliva (Tarragona), 14/04/2021



Yu (alex) Zhang
HOMOLOGATION ENGINEER

ANNEX 1 TO THE TEST REPORT
ROLLING RESISTANCE, REPORT N° CN21030951**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 : Snow (for use in severe snow conditions)
- 1.1.5 Traction tyre : No
- 1.1.6 Brand name / Trade mark : GRENLANDER
- 1.1.7 Trade description / Commercial name : Winter GL989
- 1.1.8 Tyre size : 165/70R14C 89/87R
- 1.1.9 Load index / Corresponding mass Q_r [kg] : 89 / 580
- 1.1.10 Tyre structure : Radial
- 1.1.11 Date code, other manufacturer markings : 0621, 17B CMCNCB
- 1.1.12 Inflation pressure [kPa] : 375
- 1.1.13 Test tyre internal reference : CN21030951
- 1.1.14 Test rim : 5.0 x 14
- 1.1.15 Test rim internal reference : RIM5.0 x 14
- 1.1.16 Test rim material : Steel
- 1.2. Test machine data**
- 1.2.1 Identification : MTS
- 1.2.2 Drum diameter [mm] : 2,000

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

C2/C3: 80 km/h (all speed and load symbol < equal to 121)

FULFILS/NOT FULFILS

1.3.3 Load Index (LI) / Load [kg] : 89 / 580

1.3.4 Test load [kg / N] : 493 / 4,835

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] : 375

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] : 0.2753

1.3.7 Distance from the tyre axis to the drum outer surface under steady state conditions during skim test (r_L)[m] : 0.3

1.3.8 Ambient temperature T_{am} [°C] : 25.45

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

FULFILS/NOT FULFILS

1.3.9 Skim test load [N] : 150.6

C3 ≤ 500 N

FULFILS/NOT FULFILS

* 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.
 IDIADA Automotive Technology, S.A. N.I.F. A43581610

- 1.3.10 Spindle force (Ft) [N] : 31.82
- 1.3.11 Spindle force during skim test (Ft) [N] : 2.59
- 1.3.12 Parasitic loss (Fpl) [N] : 3.361
- 1.3.13 Rolling resistance (Fr) [N] : 37.22

2. TEST RESULTS

- 2.1. Rolling resistance coefficient
 - 2.1.1 Initial value (or average in the case of more than 1) [N/kN] : 7.70
 - 2.1.2 Temperature corrected value [N/kN] : 7.72
 - 2.1.3 Temperature and drum diameter corrected value [N/kN] : 7.72

Rolling resistance coefficient Cr [N/kN] = 7.72

- 2.2. Limit value [N/kN]

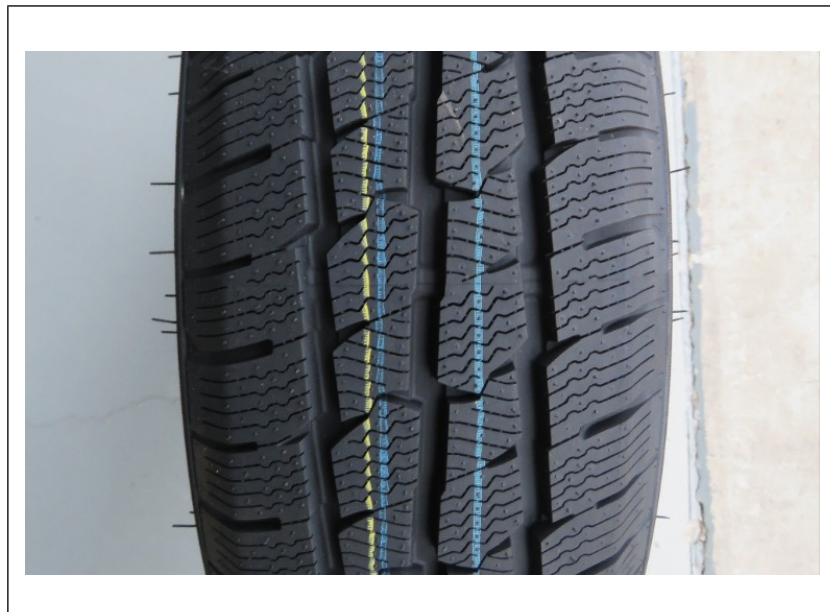
	Stage 1	Stage 2
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

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: Yancheng, China

Date of test: 26/02/2021

Yu (alex) Zhang
HOMOLOGATION ENGINEER