

**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- ~~approval withdrawn~~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 Regulation number 117.

Approval number: E4*117R02/09*9658*03

1. Manufacturer's name and address : Shandong Longyue Rubber Co., Ltd.
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' and 'category of use' of
the type of tyre : Class C1, Snow
- 3.1. Snow tyre for use in severe snow
conditions : ~~yes~~/no ⁽¹⁾
- 3.2. Traction tyre : ~~yes~~/no ⁽¹⁾
4. Tyre type designation :
- 4.1. Brand name(s)/trademark(s) of the
type of tyre : GRENLANDER;ARIVO;
CONSTANCY;T TYRE; ILINK; LUXXAN;
RHINO; CRYSTAL; FRONWAY;
ROCKBLADE;SAILWIN;XBRI;
ROADMARCH

- 4.2. Trade description(s)/Commercial name(s) of the type of tyre : MAHO 77;TOPOWER 87 H/T; TERRANO ARV H/T;POWERCITY 77; ROADPOWER H/T;ROADKING H/T; FORZA H/T2; INSPIRER F4; ROCK 717 H/T; TWENTY TWO;Maxim;PRIMEMARCH H/T 77
5. Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity tests : CSI S.p.A.
v.le Lombardia 20
20021 Bollate (MI)
Italy
6. Performance(s) approved : sound level at (~~stage 1~~/stage 2)⁽¹⁾, wet adhesion level, rolling resistance level (~~stage 1~~/stage 2)⁽¹⁾
- 6.1. Sound level of the representative tyre size, see Paragraph 2.5. of Regulation number 117, as per item 7. of the test report in the appendix 1 to Annex 3: 73 dB(A) at reference speed of ~~70~~/80 km/h⁽¹⁾.
- 6.2. Wet adhesion level of the representative tyre size, see Paragraph 2.5. of Regulation number 117, as per item 7. of the test report in the appendix to Annex 5: 1.40 (G) using the vehicle ~~or trailer~~ method⁽¹⁾.
- 6.3. Rolling resistance level of the representative tyre size, see paragraph 2.5. of Regulation number 117, as per item 7. of the test report in the appendix 3 to Annex 6: 8.950 N/kN.
- 6.4. Snow grip level of the representative tyre size, see paragraph 2.5. of Regulation No. 117, as per item 7. of the test report in the appendix⁽²⁾ to Annex 7: -- (Snow grip index) using the brake on snow method⁽¹⁾, ~~spin traction method⁽¹⁾ or acceleration method⁽¹⁾~~.
7. Number of report issued by that service : 86-R117-4229/18-00
0160\ISP\OMLS\19_2
8. Date of report issued by that service : 14/12/2018
29/05/2019
9. Reason(s) of extension (if applicable) : Addition of trademark and trade descriptions
Addition of new tyre size, which does not affect
the worst case selection
10. Any remarks : Change of technical service



Approval number: E4*117R02/09*9658*03

11. Place : Zoetermeer

12. Date : 18 June 2019

13. Signature :



R.F.R. Clement

14. Annexed to this communication are:

14.1. 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 ⁽³⁾.

14.2. 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, adding in case of Class C1 tyres the mark 'reinforced' (or 'extra load') or the speed symbol of snow tyres or in the case of tyres of Classes C2 and C3, the mark 'traction', if so required by paragraph 3.1. of this Regulation.

⁽¹⁾ Strike out what does not apply.

⁽²⁾ Appendix 2 for C1 and C2 tyres.

Appendix 3 for C3 tyres.

⁽³⁾ 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.

RAPPORTO DI PROVA / TEST REPORT

NUMBER
0160\ISP\OMLS\19_2

ISSUE DATE
29/05/2019

DIVISION
AUTOMOTIVE

LABORATORY
Homologation

SPECIMEN DESCRIPTION

Tyre Type

**MAHO 77; TOPOWER 87 H/T; TERRANO ARV H/T; POWERCITY 77; ROADPOWER H/T;
ROADKING H/T; FORZA H/T2; INSPIRER F4; ROCK 717 H/T; TWENTY TWO; Maxim;
PRIMEMARCH H/T 77**

APPROVAL EXTENSION TESTS

MANUFACTURER

Shandong Longyue Rubber Co., Ltd.

The South of Yalujiang Road, Wenzhuang Village Qinghe Agency of Cao County,
Heze City, Shandong Province 274400 China (PRC)

REFERENCE STANDARD

Regulation 117/02

Supplement 9

(E/ECE/324/Rev.2/Add.116/Rev.4/Amend.1 – E/ECE/TRANS/505/Rev.2/Add.116/Rev.4/Amend.1)

GENERAL DATA

Test date:	N/A
Test site:	N/A
Sampling:	N/A
Deviation from test methods:	N/A

DECLARATIONS

Test results contained in this test report pertain exclusively to the tested specimen.

This test report cannot be reproduced partially without the consent of the test center managing director.



PRODUCT IDENTIFICATION

Brand-name(s)	GRENLANDER;ARIVO; CONSTANCY;T TYRE; ILINK; LUXKAN; RHINO; CRYSTAL; FRONWAY; ROCKBLADE;SAILWIN;XBRI; <u>ROADMARCH</u>
Trade description(s)	MAHO 77;TOPOWER 87 H/T; TERRANO ARV H/T;POWERCITY 77; ROADPOWER H/T;ROADKING H/T;FORZA H/T2; INSPIRER F4; ROCK 717 H/T; <u>TWENTY TWO;Maxim;PRIMEMARCH H/T 77</u>
Company name and address of manufacturer	Shandong Longyue Rubber Co., Ltd. The South of Yalujiang Road, Wenzhuang Village Qinghe Agency of Cao County, Heze City, Shandong Province 274400 China (PRC)
Tyre class	C1
Category of use:	Snow

TYRE MAIN FEATURES

See attached Technical Sheet.



APPROVAL STATUS

Approval Number: E4*117R02/09*9658*02 Last amended on: 14/01/2019

For details, see test reports:

- 86-R117-4229/18-00 issued on 14/12/2018 by TÜV Rheinland Krafffahrt GmbH

REASON FOR EXTENSION

- Addition of trademark and trade descriptions
- Addition of new tyre size, which does not affect the worst case selection



SUMMARY OF TEST RESULTS

The results of the previous tests are still valid as no difference can affect tests already performed and all new variant/versions fulfil the requirements of Regulation ECE 117/02.

Tests and verification		PASS	FAIL	N/A	R
1	<i>Annex 3</i> Tyre-rolling sound emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	<i>Annex 5</i> Adhesion on wet surfaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	<i>Annex 6</i> Rolling resistance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	<i>Annex 7</i> Snow tyre for use in severe snow conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



RESULTS

Following verification and tests performed, we declare that the products submitted for approval comply with all technical requirements of UNECE Regulation 117/02.

DATA
Date**29/05/2019****Settore Omologazioni**
Test Engineer**Luca Bolgiani****Area Omologazioni**
Homologation Area**Ing. Daniele Gervasini**

Documento firmato digitalmente ai sensi del D. Lgs. N. 82 del 7 Marzo 2005 e successive modifiche
Digitally signed document in accordance with Legislative Decree n. 82 dated March 7th 2005 and subsequent amendments.



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 9)

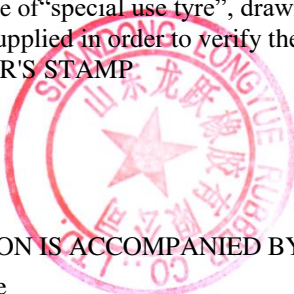
1. GENERAL

- 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 : Shandong Longyue Rubber Co., Ltd.
- 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(PROC)
- 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;ARIVO; CONSTANCY;T TYRE;ILINK;LUXXAN;RHINO; CRYSTAL;FRONWAY;ROCKBLADE;SAILWIN;XBRI; **ROADMARCH**
Tread pattern : MAHO 77;TOPOWER 87 H/T; TERRANO ARV H/T;POWERCITY 77; ROADPOWER H/T;ROADKING H/T;FORZA H/T2; INSPIRER F4;ROCK 717 H/T; **TWENTY TWO;Maxim;PRIMEMARCH H/T 77**

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

MANUFACTURER'S STAMP



Signature :

..... *Ren Hailong*

Name: ...Ren Hailong...



THIS APPLICATION IS ACCOMPANIED BY:

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

List of tyre size

Brand name(s) or Trade mark(s) : GRENLANDER;ARIVO;CONSTANCY;T TYRE;
ILINK;LUXXAN;RHINO;CRYSTAL;FRONWAY;
ROCKBLADE;SAILWIN;XBRI;**ROADMARCH**

Tread pattern : MAHO 77;TOPOWER 87 H/T;TERRANO ARV H/T;POWERCITY 77;
ROADPOWER H/T;ROADKING H/T;FORZA H/T2;INSPIRER F4;
ROCK 717 H/T;**TWENTY TWO;Maxim;PRIMEMARCH H/T 77**

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
235/65R17 108H XL	E4-02104178	72dB(A)	1.1	10.5
265/65R17 112H	E4-02104179	72dB(A)	1.1	10.5
255/55R19 111V XL	E4-02104180	73dB(A)	1.1	10.5
235/70R16 106H	E4-02104181	71dB(A)	1.1	10.5
225/70R16 103H	E4-02104182	71dB(A)	1.1	10.5
215/70R16 100H	E4-02104183	71dB(A)	1.1	10.5
215/60R17 100H XL	E4-02104184	72dB(A)	1.1	10.5
215/65R17 99V	E4-02104185	71dB(A)	1.1	10.5
235/70R17 107H	E4-02104186	71dB(A)	1.1	10.5
235/60R18 107H XL	E4-02104187	72dB(A)	1.1	10.5
265/60R18 114H XL	E4-02104188	73dB(A)	1.1	10.5
275/65R18 116H XL	E4-02104189	73dB(A)	1.1	10.5
215/75R15 100H	E4-02109479	71dB(A)	1.1	10.5
225/75R15 102H	E4-02109480	71dB(A)	1.1	10.5
235/75R15 105H	E4-02109481	71dB(A)	1.1	10.5
215/65R16 102H XL	E4-02109483	72dB(A)	1.1	10.5
225/75R16 104T	E4-02109486	71dB(A)	1.1	10.5
235/60R16 100H	E4-02109487	71dB(A)	1.1	10.5
255/70R16 111H XL	E4-02109489	73dB(A)	1.1	10.5
245/70R16 111H	E4-02109488	72dB(A)	1.1	10.5
235/60R17 102H	E4-02109491	71dB(A)	1.1	10.5
265/70R17 115H	E4-02109494	72dB(A)	1.1	10.5
245/65R17 111H	E4-02109492	71dB(A)	1.1	10.5
245/60R18 105H	E4-02109497	71dB(A)	1.1	10.5
255/60R18 112H XL	E4-02109500	73dB(A)	1.1	10.5
265/70R16 112T	E4-02102185	72dB(A)	1.1	10.5
265/75R16 116T	E4-02114023	72dB(A)	1.1	10.5
265/70R15 112T	E4-02114024	72dB(A)	1.1	10.5
<u>235/60R16 100H</u>	<u>E4-0298357</u>	<u>71dB(A)</u>	<u>1.1</u>	<u>10.5</u>

Worst Case Selection

Test size for rolling sound : 275/65R18 116H XL

Because of : Widest

Test size for wet grip : 275/65R18 116H XL

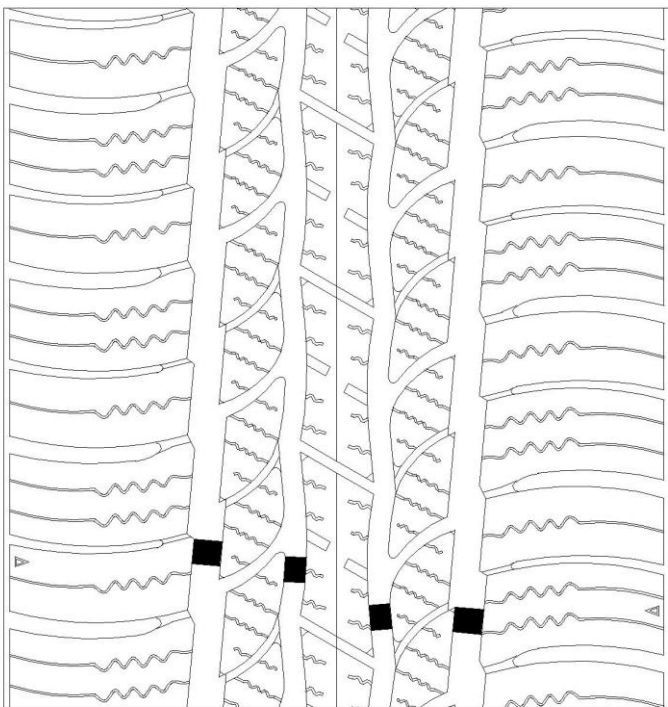
Because of : The wet grip test result of 275/65R18 116H XL is G=1.40, which is 110% above the limit value of ECE-R117 (for snow tyre for us, the 10% limit value is G=1.1)

Test size for rolling resistance : 215/65R17 99V

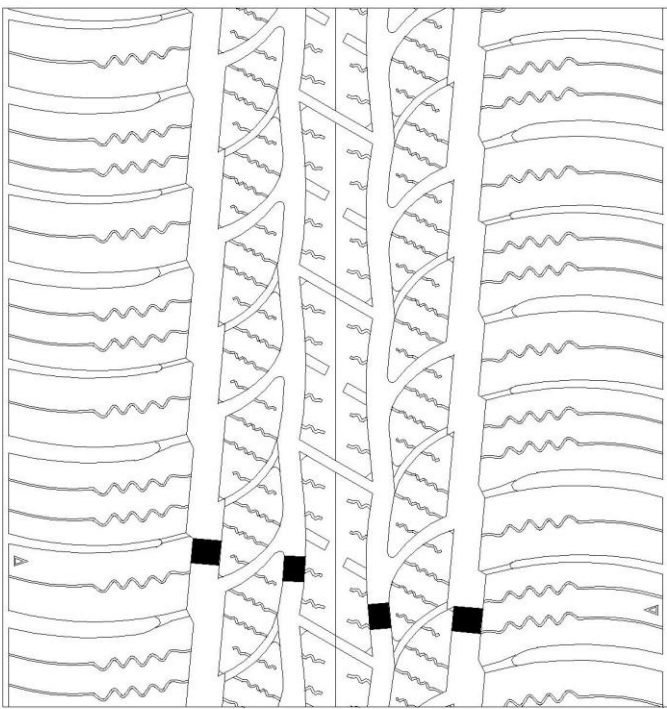
Because of : Lowest load capacity index



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

Manufacturer name	:	Shandong Longyue Rubber Co., Ltd.
Pattern name	:	MAHO 77;TOPOWER 87 H/T;TERRANO ARV H/T;POWERCITY 77; ROADPOWER H/T;ROADKING H/T;FORZA H/T2;INSPIRER F4; ROCK 717 H/T; <u>TWENTY TWO;Maxim;PRIMEMARCH H/T 77</u>
Tyre Size	:	275/65R18 116H XL
Market	:	EU/US
Pitch number	:	36
Pitch ratio	:	0.85/1.0/1.2
Void volume [%]	:	64
Width: main grooves [mm]	:	12/9/9/12
Depth: center groove [mm]	:	9
Depth: shoulder groove [mm]	:	8
Tyre tread pattern	:	

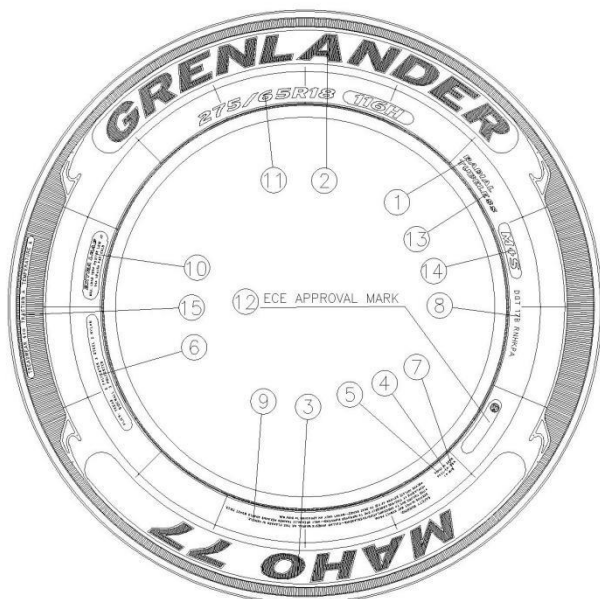
Drawing of the tread pattern
(for measured tyre using for tyre rolling resistance test)

Manufacturer name	:	Shangdong Longyue Rubber Co., Ltd.
Pattern name	:	MAHO 77;TOPOWER 87 H/T;TERRANO ARV H/T;POWERCITY 77; ROADPOWER H/T;ROADKING H/T;FORZA H/T2;INSPIRER F4; ROCK 717 H/T; <u>TWENTY TWO;Maxim;PRIMEMARCH H/T 77</u>
Tyre Size	:	215/65R17 99V
Market	:	EU/US
Pitch number	:	36
Pitch ratio	:	0.85/1.0/1.2
Void volume [%]	:	64
Width: main grooves [mm]	:	10/7/7/10
Depth: center groove [mm]	:	8.4
Depth: shoulder groove [mm]	:	7.5
Tyre mass [kg]	:	12.09
Tread depth [mm]	:	8.4
Tread width [mm]	:	166.54
Curvature radius of tread crown [mm]	:	860
Tyre outer diameter [mm]	:	712
Tread plies	:	2POLYESTER + 2 STEEL + 2NYLON
Tyre tread pattern	:	

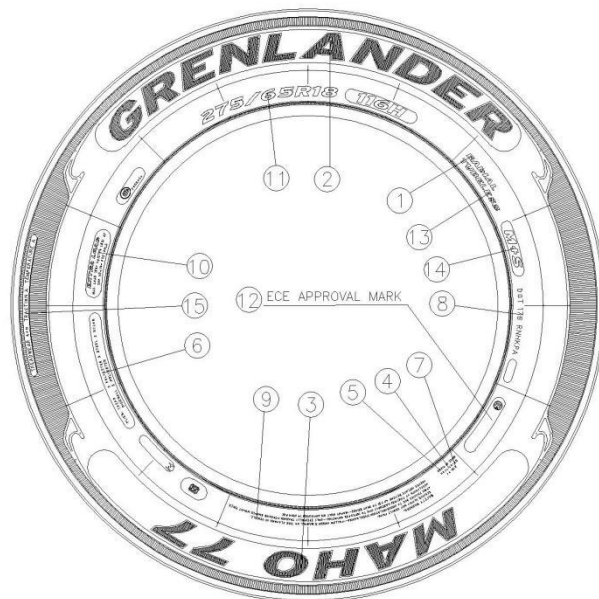
Drawing of the tyre sidewall

Tyre Size

: 275/65R18 116H XL



Upper mold



Lower mold

1.RADIAL	1.RADIAL
2.GRENLANDER	2.GRENLANDER
3.MAHO 77	3.MAHO 77
4.MOLD NO.	4.MOLD NO.
5.MADE IN CHINA	5.MADE IN CHINA
6.PLIES:TREAD 2POLYESTER 2STEEL 2NYLON SIDEWALL 2POLYESTER	6.PLIES:TREAD 2POLYESTER 2STEEL 2NYLON SIDEWALL 2POLYESTER
7.RIM:8J	7.RIM:8J
8.DOT 17B RNHKPA	8.DOT 17B RNHKPA XXXX(DATE CODE)
9.SAFETY WARNING	9.SAFETY WARNING
10.MAX. LOAD 1250kg (2755 LBS) AT 300 kPa (44 PSI) COLD	10.MAX. LOAD 1250kg (2755 LBS) AT 300 kPa (44 PSI) COLD
11. 275/65R18 116H	11. 275/65R18 116H
12. (E4)XXXXXXX	12. (E4)XXXXXXX
13.TUBELESS	13.TUBELESS
14.M+S	14.M+S
15. TREADWEAR 460 TRACTION A TEMPERATURE A	15. TREADWEAR 460 TRACTION A TEMPERATURE A

Drawing of the tyre sidewall

Tyre Size

: 215/65R17 99V



Upper mold



Lower mold

1.RADIAL	1.RADIAL
2.GRENLANDER	2.GRENLANDER
3.MAHO 77	3.MAHO 77
4.MOLD NO.	4.MOLD NO.
5.MADE IN CHINA	5.MADE IN CHINA
6.PLIES:TREAD 2POLYESTER 2STEEL 2NYLON SIDEWALL 2POLYESTER	6.PLIES:TREAD 2POLYESTER 2STEEL 2NYLON SIDEWALL 2POLYESTER
7.RIM:6½J	7.RIM:6½J
8.DOT 17B JNFKPA	8.DOT 17B JNFKPA XXXX(DATE CODE)
9.SAFETY WARNING	9.SAFETY WARNING
10. MAX. LOAD 775kg (1708 LBS) AT 300 kPa (44 PSI) COLD	10. MAX. LOAD 775kg (1708 LBS) AT 300 kPa (44 PSI) COLD
11. 215/65R17 99V	11. 215/65R17 99V
12. (E4)XXXXXXX	12. (E4)XXXXXXX
13.TUBELESS	13.TUBELESS
14.M+S	14.M+S
15. TREADWEAR 460 TRACTION A TEMPERATURE A	15. TREADWEAR 460 TRACTION A TEMPERATURE A