

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

COMMUNICATION

Concerning <sup>(1)</sup>

- ~~approval granted~~
- approval extended
- ~~approval refusal~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of tyre for motor vehicles pursuant to Regulation number 30.

**Approval number: E4\*30R02/20\*100043\*01**

- |      |  |  |
|------|--|--|
| 1.   | Manufacturer's name and address                                      | : Kumho Tire Co., Inc.<br>658 Eodeung-daero<br>GWANGSAN-GU GWANGJU<br>Korea, Republic of         |
| 2.   | Tyre type designation <sup>(2)</sup>                                 |  |
| 2.1. | Brand-name(s)/trademark(s)   | : MARSHAL  |
| 2.2. | Trade description(s)/Commercial name(s)                              | : MU12   |
| 3.   | If applicable, name and address of the manufacturer's representative | : Not applicable   |
| 4.   | Summarised description   |  |
| 4.1. | Tyre size designation  | : 225/50ZR17   |
| 4.2. | Category of use  | : normal/ <del>snow</del> / <del>special use</del> / <del>temporary use</del> <sup>(1)</sup>     |
| 4.3. | Structure  | : <del>diagonal</del> / <del>bias belted</del> / radial/ <del>run flat tyre</del> <sup>(1)</sup> |
| 4.4. | Speed category symbol  | : Y  |
| 4.5. | Load-capacity index  | : 98   |

**Approval number: E4\*30R02/20\*100043\*01**

5. Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity : TÜV Rheinland Kraftfahrt GmbH  
Am Grauen Stein  
D-51101 Köln  
Germany
6. Date of report issued by that service : 2019-10-01
7. Number of report issued by that service : 83-C90030-102869-100043-01
8. Reason(s) of extension (if applicable) : Upgrade of regulation supplement number  
Update of construction variant(s)  
Type approval number is converted in accordance to the layout of revision 3 of the 1958 agreement.  
Addition of protective rib; Modification of manufacturer's address
9. Any remarks : Not applicable
10. Place : Zoetermeer
11. Date : 23 October 2019
12. Signature :

  
P. Lingsma

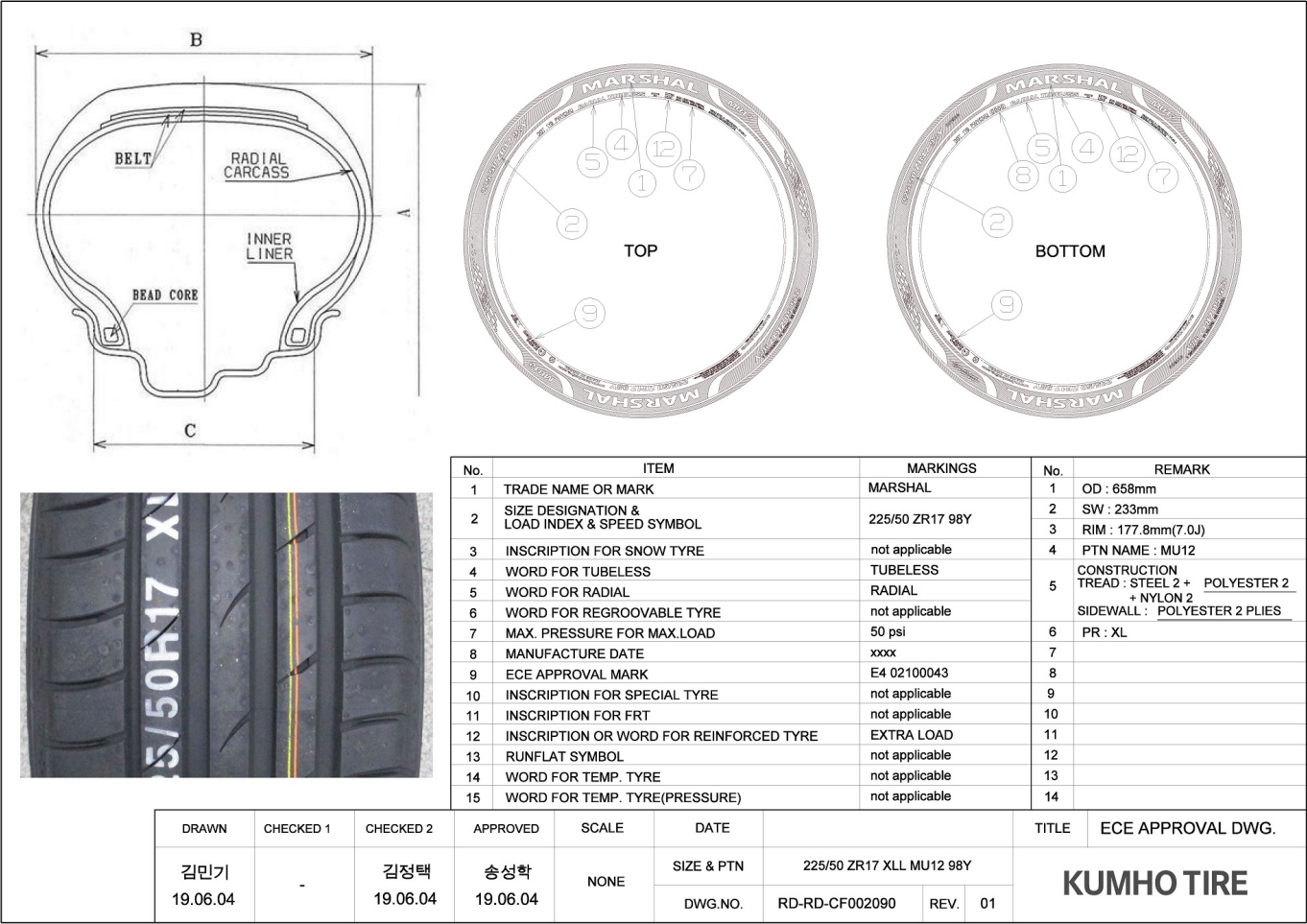
13. The list of documents in the approval file which are deposited at the administrative service having delivered the approval and which can be obtained upon request.
- Application form relating to ECE approval for a pneumatic tyre pursuant to Regulation number 30.
  - The drawing of the tyre's sidewalls, tread and dimensioned cross-section.
  - The test report as mentioned in item 7.

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<sup>(1)</sup> Strike out what does not apply

<sup>(2)</sup> A list of Brand name(s)/trademark(s) or Trade description(s)/Commercial name(s) may be annexed to this communication

APPENDIX 1. CONSTRUCTION IMAGE (1)



(1) The tyre marking statements are considered leading in case of deviating drawing information.



Test report data delivered by the designated technical service or its laboratory/branch office responsible for conducting the approval tests

Tested in accordance to ECE regulation no. 30, 02 series of amendments, supplement 20

Test reports	:	<table><tr><th>Date</th><th>Reference</th></tr><tr><td>2019-10-01</td><td>83-C90030-102869-100043-01</td></tr></table>	Date	Reference	2019-10-01	83-C90030-102869-100043-01
Date	Reference					
2019-10-01	83-C90030-102869-100043-01					
Name and address of designated technical service	:	TÜV Rheinland Kraftfahrt GmbH Am Grauen Stein D-51101 Köln Germany				
Name and address of branch office of designated technical service	:	TÜV Rheinland Korea Ltd. 2F N tower, 25, Mulla-ro 28-gil Yeongdeungpo-gu, Seoul, 07298 Republic of Korea				
Tyre size designation	:	225/50ZR17				
Brand-name(s) / trademark(s)	:	MARSHAL				
Trade description(s) / commercial name(s)	:	MU12				
Category of use	:	Normal				
Structure	:	Radial				
Speed category symbol	:	Y				
Load capacity index	:	98				
Protective rib	:	Y				
Tubeless	:	Y				
Standard / reinforced / T-type temporary use	:	Reinforced				
Ply-rating number of diagonal (bias-ply) tyres	:	N.A.				
Factor 'x'	:	0.70				
Maximum speed for speed symbol Y for load rating determination (art. 2.37.6)	:	300 km/h				
Tread-wear indicators	:					
Height of lowest tread-wear indicator	:	1.68 mm				
Height of tallest tread-wear indicator	:	1.92 mm				
Number of transverse rows of wear indicators	:	6				
Special use tread pattern features	:	N.A.				



# 1 Test data

## 1.1 MEASURING DATA (ACCORDING TO ANNEX 6)

1.1.1	Measuring rim width	:	7.0 inch
1.1.2	Conditioning		
	Mounting pressure	:	3.0 bar
	Adjusted pressure	:	2.2 bar
	Conditioning time	:	24 hrs
	Test room temperature	:	25 °C
	Readjusted pressure	:	2.2 bar
1.1.3	Measurements		
	Overall width measured	:	229.0 mm
	Calculated outer diameter	:	661.4 mm
1.1.4	Plies of tyre subject for type approval	:	

Material	Side wall	Tread
Steel	0	2
Polyester	2	2
Nylon	0	2

## 1.2 LOAD SPEED PERFORMANCE TEST (ACCORDING TO ANNEX 7)

1.2.1	Reference is made to a worst case tyre out of the tyre range	:	N
1.2.2	Test setup		
	Test drum diameter	:	1.70 m
	Test rim width	:	7.0 inch
	Test axle load	:	510 kg
1.2.3	Conditioning		
	Test inflation pressure	:	3.6 bar
	The test inflation pressure differs from those given under Annex 7 paragraph 1.2	:	N
	Conditioning time	:	3 hrs
	Test room temperature	:	38 °C
	Readjusted pressure	:	3.6 bar
1.2.4	Outer diameter before test	:	662.7 mm
1.2.5	Test procedure		
	Time from zero to initial test speed	:	10 min
	Test steps	:	

Step	Duration (min)	Speed (km/h)
1.	20	260
2.	10	270
3.	10	280
4.	10	290

1.2.6	Test results		
	Traces of tread separation, ply separation, cord separation, chunking or broken cords after the load/speed test	:	N
	Conditioning time after test	:	6 hrs
	Calculated outer diameter of measured circumference after test	:	669.1 mm
	Change in outer diameter after test	:	0.97 %



2	TYRE MARKINGS	STATEMENT <sup>(1)</sup>
2.1	Brand name or trade mark	: Marked
2.2	Trade description / commercial name	: Marked
2.3	Date of manufacture	: Marked
	- character height $\geq 4$ mm	: Y
2.4	Upper side wall markings	
	"TEMPORARY USE ONLY"	: N.A.
	"INFLATE TO 420kPa (60 psi)"	: N.A.
2.5	Lower side wall markings	
	Approval mark in accordance to article 3.2, 3.4, 5.4 and Annex 2	: Y
	Tyre structure letter code	: ZR
	Tyre to rim fitment code	: N.A.
	Service description	
	- marked within brackets	: N.A.
	- immediately after tyre size designation	: Y
	- character height $\geq 6$ mm	: Y
	"RADIAL"	: Marked
	- character height $\geq 4$ mm	: Y
	"B" and "BIAS BELTED"	: N.A.
	"TUBELESS"	: Marked
	- character height $\geq 4$ mm	: Y
	Run flat symbol	: N.A.
	"REINFORCED" or "EXTRA LOAD"	: Marked
	- character height $\geq 4$ mm	: Y
	"M+S"/"M.S"/"M&S"	: N.A.
	"ET"	: N.A.
	"POR"	: N.A.
	Location of the applicable mandatory markings	: In lower area
	Symmetrical tyres marked on both sidewalls	: There are no symmetrical tyres
	Asymmetrical tyres marked at least on the outer tyre side wall	: Y

### 3 Nominal envelop dimensions of the inflated tyre mounted on the measuring rim <sup>(1)</sup>

S	: 233 mm
D	: 658 mm
A	: 177.8 mm

<sup>(1)</sup> The tyre marking statements are considered leading in case of deviating drawing information.

# APPLICATION FOR APPROVAL OF A TYPE OF PNEUMATIC TYRE FOR TYRES FOR MOTOR VEHICLES AND THEIR TRAILERS ACCORDING TO ECE REGULATION No. 30, 02 SERIES OF AMENDMENTS, SUPPLEMENT 20

- |         |   |   |  |
|---------|---|---|--|
| 4.1     | Name and address of manufacturer (applicant)  | : | Kumho Tire Co., Inc.<br>658 Eodeung-daero<br>GWANGSAN-GU GWANGJU<br>Korea, Republic of                             |
|         | Name and address of branch office of designated technical service (manufacturers duly accredited representative)  | : | TÜV Rheinland Korea Ltd.<br>2F N tower, 25, Mullae-ro 28-gil<br>Yeongdeungpo-gu, Seoul, 07298<br>Republic of Korea |
| 4.1.1   | Tyre size designation   | : | 225/50ZR17   |
| 4.1.2.1 | Brand-name(s) / trademark(s)  | : | MARSHAL  |
| 4.1.2.2 | Trade description(s) / commercial name(s)   | : | MU12   |
| 4.1.3   | Category of use   | : | Normal   |
| 4.1.4   | Structure   | : | Radial   |
| 4.1.5   | Speed category symbol   | : | Y  |
| 4.1.6   | Load capacity index   | : | 98   |
| 4.1.7   | Tubeless  | : | Y  |
| 4.1.8   | Standard / reinforced / T-type temporary use  | : | Reinforced   |
| 4.1.9   | Ply-rating number of diagonal (bias-ply) tyres  | : | N.A.   |
| 4.1.10  | Overall dimensions  |   |  |
|         | Overall section width   | : | 229.0 mm   |
|         | Outer diameter  | : | 661.4 mm   |
| 4.1.11  | Rims on which the tyre can be mounted   | : | 7.0 inch   |
| 4.1.12  | Measuring rim   | : | 7.0 inch   |
|         | Test rim  | : | 7.0 inch   |
| 4.1.13  | Test inflation pressure if different from those given under Annex 7 paragraph 1.2   | : | N.A.   |
| 4.1.14  | Factor 'x'  | : | 0.70   |
| 4.1.15  | Maximum speed and the load carrying capacity allowed for that maximum speed in case of speeds in excess of 300 km/h                                     | : | N.A.   |
| 4.1.16  | Bead retention identification for the "flat tyre running mode" of "run flat tyres"  | : | N.A.   |
| 4.2     | The application for approval is accompanied by drawings or images of  |   |  |
|         | 1. The tyre tread pattern   | : | Y  |
|         | 2. Envelope of the inflated tyre mounted on the measuring rim, showing the relevant dimensions (see paragraphs 6.1.1 and 6.1.2)                         | : | Y  |
|         | 3. The side wall showing the relevant markings  | : | Y  |
| 4.4     | Reference to Worst-case tyre has been made for the load-speed test. The worst case tyre selection criteria can be obtained from the approval authority. | : | N  |



Reason(s) of extension : Upgrade of regulation supplement number;  
Update of construction variant(s);  
Upgrade of the type approval number;  
Addition of protective rib; Modification of manufacturer's address

The applicant, as defined in article in 4.1, declares that:

- This application is in compliance with the scope as defined in chapter 1 of the regulation.
- All data for this application are unambiguously and truthfully given.
- This application has been submitted by the duly accredited representative of the manufacturer per art 4.1 of the regulation. The underlying statement to submit on behalf of the manufacturer can be presented upon request.
- The type approval application for the subject component is submitted only at RDW as Contracting party pursuant to this UN regulation.

Company : TÜV Rheinland Korea Ltd.  
Name of person responsible for the submitted application data : Dipl.-Ing. Kwang-Sik, Kim  
Function of above mentioned authorised person : Project Manager  
E-mail address of above mentioned authorised person : kwangsik.kim@tuv.com  
Place of submission : GTAC  
Submitted for approval on (date) : 16/10/2019 08:39:19  
Reference id of the application given by the applicant : KUMHO\*30R02/20\*100043\*01

