



# MALAYSIAN STANDARD

MS 149:2018  
AMD. 1:2021

**New pneumatic passenger car tyres –  
Specification (Third revision)**

**AMENDMENT 1**

**ICS: 83.160.10**

Descriptors: tyre, pneumatic tyre, specification, passenger car

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**DEPARTMENT OF STANDARDS MALAYSIA**



# MS 149:2018, AMD.1:2021

## AMENDMENT OF MALAYSIAN STANDARD

### MALAYSIAN STANDARD

#### MS 149:2018

#### NEW PNEUMATIC PASSENGER CAR TYRES – SPECIFICATION (THIRD REVISION)

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(1) **Clause 3.2, Page 1**

Addition of clause to read as follows:

**3.2 temporary use spare tyre**

A tyre different from a tyre intended to be fitted to any vehicle for normal driving conditions but intended only for temporary use under restricted driving conditions.

**3.3 T-type temporary use spare tyre**

A type of temporary use spare tyre designed for use at inflation pressures higher than those established for standard and reinforced tyres.

(2) **Subclause 5.2.1, page 6**

Replace the subclause to read as follows:

Where application is made for tyres for speeds over 300 km/h identified as provided in 5.6.1 f), the load/speed test is carried out on one tyre at the load and speed conditions marked on the tyre. Another load/speed test shall be carried out on a second sample of the same tyre type at the load and speed conditions specified as maximum by the tyre manufacturer<sup>1</sup>. The second test may be carried out on the same tyre sample if the tyre manufacturer agrees.

MS 149:2018

Amd. 1

**Page: 1 of 5**

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<sup>1</sup> For tyres suitable for speeds in excess of 300 km/h, the maximum speed permitted by the tyre manufacturer and the load carrying capacity allowed for that maximum speed. The tyre manufacturer shall also specify these values in the technical literature for the tyre type.

## MS 149:2018, AMD.1:2021

(3) **Clause 5.5 and subclause 5.5.1, page 7**

Replace the clause and subclause to read as follows:

**Tread Wear Indicator (TWI)  $\geq$  1.6 mm height**

Each tyre shall have at least six TWI spaced approximately equally around the circumference of the tyre that enables a person inspecting the tyre to determine visually whether the tyre has worn to a tread depth of 1.6 mm. Tyres with 12 inch or smaller rim diameter shall have at least three such indicators.

(4) **Subclause 5.6.1, page 7**

Replace the subclause to read as follows:

**5.6.1** Pneumatic tyres submitted for approval shall display on both sidewalls in the case of symmetrical tyres and at least on the outer sidewall in the case of asymmetrical tyres with the information specified in a until t below.

- a) The Malaysian Standard number (MS), which shall constitute a certification that the tyre conforms to the requirement of this standard. However, this marking may be placed on one sidewall (outer) only;
- b) The product certificate number. However, this marking may be placed on one sidewall (outer) only;
- c) The manufacturer's name or trade mark;
- d) The country where the tyres being manufactured. However, this marking may be placed on one sidewall (outer) only;
- e) The tyre size designation as defined in Clause 4.1;
- f) The load-capacity index;
- g) An indication of tyre's speed category symbol as described in Annex AA;

## MS 149:2018, AMD.1:2021

- h) On tyres suitable for speeds in excess of 300 km/h:
  - i) the letter "*R*" placed in front of the rim diameter code marking shall be replaced by the inscription "*ZR*"; and/or
  - ii) the tyre shall be marked with a service description consisting of the speed symbol "*Y*" and the corresponding load index. The service description shall be marked within brackets, for example, "(95 *Y*)".
- i) "Run flat" tyres shall have a letter "*F*" before the nominal rim diameter code. (e.g. 245/40*RF*19 94 *Y*);
- j) Tyre maximum load, unit in kg;
- k) Tyre maximum air pressure, unit in kPa;
- l) The date of manufacture (date code) in the form of a group of four digits only, the first two showing the week and the last two the year of manufacture, (e.g. 2117 means 21st week of year 2017). However, this marking may be placed on one sidewall (outer) only;



- m) Wear indication sign ("Δ" or "TWI" or other specific sign). The marking shall be placed on the shoulder of the tyre and aligned to the Tread Wear Indicator. For tyre with diameter ≤ 12 inch, 3 locations at minimum and for the tyre with rim diameter > 12 inch, 6 locations at minimum.
- n) An indication of the structure: radial, run flat tyres. E.g. for radial construction shall be marked RADIAL;
- o) The word "TUBELESS" if the tyre is designed for use without an inner tube;
- p) In the case of temporary use spare tyres, the words "TEMPORARY USE ONLY" in upper case characters at least 12.7 mm high;
- q) In addition, in the case of "T" type temporary use spare tyres, the legend "INFLATE to 420 kPa (60 psi)", the upper-case characters being at least 12.7mm high;

## MS 149:2018, AMD.1:2021

- r) The actual number of plies and the composition of the ply cord material in the sidewall, and, if different, in the tread area. For example, marking:
  - i) Tread: 1 polyester 2 steel 1 Nylon
  - ii) Sidewall: 2 polyester
- s) The word “REINFORCED” or “EXTRA LOAD” if the tyre is a reinforced tyre; and
- t) The inscription *M+S* or *M.S* or *M&S* if the tyre is classified use for mud and snow condition as defined in MS 1439;

### (5) Subclause 5.6.3, page 7 and 8

Replace the subclause to read as follows:

**5.6.3** On at least one sidewall, the marking shall be positioned in an area between the maximum section width and bead of the tyre, unless the maximum section width of the tyre falls between the bead and one-fourth of the distance from the bead to the shoulder of the tyre.

**5.6.3.1** For tyres where the maximum section width falls between the bead and one-fourth of the distance from the bead to the shoulder of the tyre, locate all required marking between the bead and a point one-half the distance from the bead to the shoulder of the tyre.

**5.6.3.2** However, in no case shall the information be positioned on the tyre so that it is obstructed by the flange or any rim designated for use with that tyre.

## MS 149:2018, AMD.1:2021

### (6) New Annex AA

Addition of new Annex AA to read as follows:

#### Annex AA

(Normative)

Table AA.1. Categories of speed

Speed – category symbol	Maximum speed (km/h)
L	120
M	130
N	140
P	150
Q	160
R	170
S	180
T	190
U	200
H	210
V	240
W	270
Y	300

MS 149:2018

Amd. 1

Page: 5 of 5

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