



BSI Standards Publication

Road vehicles – Supplementary grip devices for tyres of passenger cars and light duty vehicles

Part 1: General safety and performance requirements

National foreword

This British Standard is the UK implementation of EN 16662-1:2020.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Véhicules routiers - Dispositifs supplémentaires d'adhérence pour pneumatiques de véhicules particuliers et de véhicules utilitaires légers - Partie 1 : Exigences générales de sécurité et de performance

Straßenfahrzeuge - Zusätzliche Gleitschutzvorrichtungen für Reifen an Personenfahrzeugen und leichten Nutzfahrzeugen - Teil 1: Sicherheitstechnische Anforderungen und Prüfverfahren

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European foreword

This document (EN 16662-1:2020) has been prepared by Technical Committee CEN/TC 301 “Road Vehicles”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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1 Scope

This document provides specifications for safety, quality and performance requirements for supplementary grip devices, commonly called “SGDs”, for type – approved tyres according to the current legislation, intended to be fitted on tyres on vehicles in categories M1, N1, O1, O₂ and relevant sub-categories (off road vehicles).

The requirements contained in this document apply to all SGDs, regardless of the material/technology used to build it.

In case there are available standards for the specific technology of the device, they are intended to be used in conjunction with this document.

In case no standard is available for the specific technology, this document applies.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4000-1, *Passenger car tyres and rims — Part 1: Tyres (metric series)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp/>

3.1

Supplementary Grip Device

SGD

device for the increasing of force transmission, in particular on snow and ice

Note 1 to entry: If not differently specified, this term identifies the Sample SGD.

3.2

tyre tread

part of the tyre directly in contact with the road surface

3.3

SGD tread surface

elements of the SGD between the tyre tread and the road surface

3.4

product hazard

defects implying a not acceptable loss of safety

Note 1 to entry: These hazards may occur through e.g. holes, breakages, SGD falling off the tyre, etc.

Note 2 to entry: Safety risks need to be defined in the SGD manual.

3.5

SGD type

SGD group having common physical characteristics and structure

Note 1 to entry: Common characteristics mean i.e. geometry, material. Size of a SGD type may vary.

3.6

sample SGD

SGD to be tested

3.7

reference SGD

SGD used as a basis for evaluating all other types of sample SGDs during the comparison tests

Note 1 to entry: the reference SGD is defined in Annex A.

3.8

fabric material

material composed by textile fibers

3.9

fabric SGD

SGD whose tread surface is in majority composed by fabric material

3.10

non-metallic net SGD

SGD forming a net pattern, whose tread surface is in majority composed by non-metallic materials

3.11

metallic SGD

SGD whose tread surface is in majority composed by metallic components

3.12

hybrid SGD

SGD whose tread surface combines either several materials and/or several technologies

EXAMPLE Automatic snow chains are considered to be an alternative technology.

3.13

variation of geometry

visually recognizable modification of at least one of the elements of the SGD

3.14

efficiency

rate between the average values obtained with the sample SGD and the reference SGD

3.15

producer

manufacturer, entity or organization that has the legal responsibility for placing the product on the market

Note 1 to entry: Legal reference from the European Directive 2001/95/EC Art 2(e).

3.16

snow tyres

tyres corresponding to the category SEVERE SNOW according to UN R117, with 3PMSF logo on sidewall (Alpin logo)

3.17

normal tyres

tyres without M+S and 3PMSF logo on their sidewalls

4 Requirements

4.1 General provisions

4.1.1 Size

The size of the SGD shall correspond to the tyre size list supplied by the SGD producer.

4.1.2 Adaptability

The SGDs shall be adjustable to the shape and dimension of the tyres for which they are intended.

4.1.3 Design

After mounting and tensioning the SGD, no more than 1/8 of the wheel circumference may remain SGD-free in any part of the tyre tread.

4.1.4 Static envelope

With vehicle stopped, the additional envelope of the SGD fitted on the tyre shall not be greater than:

- 20 mm on the internal side;
- 20 mm on the tyre tread;
- 25 mm on the external side (restricted to the tyre zone);
- 30 mm (only in case of Envelope Class 30, on internal, external and tyre tread side).

Concerning the envelopes on both the tyre tread and the internal side, the producer shall indicate, for each SGD type, the appropriate envelope class among those defined in Annex B. In this case, for the affiliation class of the type, all the dimensions mentioned in Table B.1 shall not be exceeded.

4.1.5 Construction and materials

The SGDs shall be built:

- in order to resist to the usage requirements (e.g.: different road surfaces, different vehicles having different mass, etc);
- in a way that both snow and ice eventually caught inside the device will not affect its performance and safety requirements.

In addition, all the elements setting up a SGD:

- shall be articulated among one another in order to permit to the adaption of the SGD to the tyre deformation during the rolling process. The relative movement between the tyre and the SGD shall be guaranteed;