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Interested committees:

Title: Draft BS ISO 4223-1 Definitions of some terms used in the tyre industry. Part 1: Pneumatic tyres.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 4223-1

Definitions of some terms used in the tyre industry —

Part 1: Pneumatic tyres

*Définitions de certains termes utilisés dans l'industrie du
pneumatique —*

Partie 1: Pneumatiques

ICS: 83.160.01; 01.040.83

ISO/TC 31

Secretariat: **ANSI**

Voting begins on:
2025-07-21

Voting terminates on:
2025-10-13

This document is circulated as received from the committee secretariat.

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
3.1 Terms relating to category of use	1
3.2 Terms relating to service description	3
3.3 Terms relating to structure	4
3.4 Terms relating to main components	4
3.5 Terms relating to dimensions (see Figure 3)	6
3.6 Terms, definitions and symbols of designation	7
3.7 Terms relating to tyre testing	11
3.8 Other general terms and definitions	12
Annex A (normative) Loads, speeds and rim diameters	15
Bibliography	27

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*.

This sixth edition cancels and replaces the fifth edition (ISO 4223-1:2017), which has been technically revised.

A list of all parts in the ISO 4223 series can be found on the ISO website.

Definitions of some terms used in the tyre industry —

Part 1: Pneumatic tyres

1 Scope

This document defines a number of significant terms related to pneumatic tyres, i. e. tyres suitable for containing a gas at a pressure which can be adjusted, used in the tyre industry, together with corresponding codes, symbols and values.

NOTE 1 For other terms used in this field and their equivalents in other languages, see ISO 3877 (all parts). For terms and definitions relating to wheels/rims, see ISO 3911.

NOTE 2 [Annex A](#) forms a normative part of this document.

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 18805, *Tyre classification — Agricultural, forestry and construction machines*

ISO 16992, *Passenger car tyres — Spare unit substitutive equipment (SUSE)*

ISO 19447, *Passenger car tyres — Method for measuring ice grip performance — Loaded new tyres*

3 Terms, definitions and symbols

For the purposes of this document, the terms, definitions and symbols given in ISO 4251-4 and the following apply.

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

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

3.1 Terms relating to category of use

3.1.1

normal tyre

tyre intended for highway (or public highway) use which does not require “M+S” (or other variations) or severe snow or *special use* ([3.1.2](#)) tyre designations

3.1.2

special use tyre

tyre intended for mixed use both on- and off-road or for other special duty and primarily designed to initiate and control vehicle motion in off-road conditions

Note 1 to entry: Examples of special use tyre designations are *ET* ([3.6.1.1.29](#)), *MPT* ([3.6.1.1.30](#)), *ML* ([3.6.1.1.16](#)), *POR* ([3.6.1.1.31](#)).

3.1.2.1

professional off-road tyre

POR tyre

special use tyre (3.1.2) primarily used for service in severe off-road conditions

3.1.3

snow tyre

mud and snow tyre

tyre whose *tread* (3.4.4) pattern, tread compound or *structure* (3.3.1) is primarily designed to achieve in winter conditions, e.g. snow, and/or on mud and sand a performance better than that of a *normal tyre* (3.1.1) with regard to its ability to initiate or control vehicle motion

Note 1 to entry: It is identified by a combination of the letters “M” and “S”, e. g. M+S, M&S, M.S.

3.1.3.1

ice grip tyre

passenger car *snow tyre* (3.1.3) that is classified as *tyre for use in severe snow conditions* (3.1.4) and additionally designed to be used on road surfaces covered with ice

Note 1 to entry: An ice grip tyre shall conform to ISO 19447.

Note 2 to entry: An ice grip tyre conforming to UN Regulation No. 117 shall be marked with the Ice Grip symbol (see Figure 1):



Figure 1 — Ice Grip symbol

3.1.4

severe snow use tyre

tyre for use in severe snow conditions

tyre whose *tread* (3.4.4) pattern, tread compound or *structure* (3.3.1) is specifically designed based on performance testing using ISO 18106 and which is identified by an “Alpine” or “3 Peak Mountain Snow Flake (3PMSF)” symbol

Note 1 to entry: Refer to regional standards and regulatory requirements for dimensions and performance criteria, placement adjacent to “M+S” and characterized by the 3 Peak Mountain Snow Flake (3PMSF) symbol (see Figure 2).

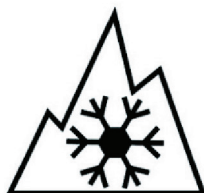


Figure 2 — 3 Peak Mountain Snow Flake (3PMSF) symbol

3.1.5

temporary-use spare tyre

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

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

temporary-use spare tyre (3.1.5) designed for use at an inflation pressure higher than those established for standard and *reinforced tyres* (3.8.11)

Note 1 to entry: It is designated with the “T” prefix.

3.1.6**not for highway service tyre****NHS tyre**

tyre primarily designed for use outside of public roads, but suitable for temporary/incidental use on public roads and identified with the letters “NHS” (3.6.1.1.8)

3.1.7**traction tyre**

tyre that may have the inscription “TRACTION” and intended to be fitted primarily to the drive axle(s) of a vehicle to maximize force transmission in various circumstances

3.2 Terms relating to service description**3.2.1****service description**

tyre identification, in addition to the *tyre size designation* (3.6.1), which consists of one or two *load indices (LI)* (3.2.1.1) and a *speed symbol (SS)* (3.2.1.2)

Note 1 to entry: When two load indices are used, these indicate the load carrying capacity in single and dual fitment.

EXAMPLE 91H or 121/119S.

3.2.1.1**load index**

LI

numerical code which indicates a reference load used to define the load carrying capacity of the tyre, which can depend on operating conditions and tyre type

Note 1 to entry: See [Table A.1](#).

3.2.1.2**speed symbol**

SS

alpha or alpha-numeric code which indicates the *speed category* (3.2.1.3) of the tyre, which can depend on operating conditions and tyre type

Note 1 to entry: See [Table A.2](#).

3.2.1.3**speed category**

maximum speed which the tyre can sustain, expressed by the speed symbol, and which is part of the *service description* (3.2.1)

Note 1 to entry: See [Table A.2](#) for speed symbols.

3.2.1.4**additional service description**

secondary service description identifying a special type of service at which the tyre is allowed to operate in addition to the main service description

Note 1 to entry: The additional service description shall be marked within a circle and shall be located close to the main service description.

Note 2 to entry: The additional service description shall consist of either one or two load indices that are greater than and a speed symbol that indicates a speed category that is less than that of the main service description or one or two load indices that are lower than or equal to and a speed symbol that indicates a speed category that is greater than that of the main service description.

3.3 Terms relating to structure

3.3.1

structure

technical characteristics of the tyre's structure

3.3.1.1

diagonal structure

bias-ply structure

cross-ply structure

structure (3.3.1) in which the ply cords (3.4.5) that extend to the beads (3.4.1) are laid at alternate angles of substantially less than 90° to the centreline of the tread (3.4.4)

3.3.1.1.1

diagonal tyre

tyre having a *diagonal structure* (3.3.1.1)

3.3.1.2

bias-belted structure

structure (3.3.1) in which the ply cords (3.4.5) that extend to the beads (3.4.1) are laid at alternate angles of substantially less than 90° to the centreline of the tread (3.4.4) and are restricted by a belt (3.4.10) comprising one or more layers of substantially inextensible cord (3.4.5) material

3.3.1.2.1

bias-belted tyre

tyre having a *bias-belted structure* (3.3.1.2)

3.3.1.3

radial structure

structure (3.3.1) in which the ply cords (3.4.5) that extend to the beads (3.4.1) are laid at substantially 90° to the centreline of the tread (3.4.4) in a zone including most of the sidewall (3.4.2) and located outside the bead (3.4.1) and the essentially inextensible circumferential belt (3.4.10) that stabilizes the carcass (3.4.8)

3.3.1.3.1

radial tyre

tyre having a *radial structure* (3.3.1.3)

3.3.1.3.2

extended radial structure

radial structure (3.3.1.3) in which the ply cords (3.4.5) that extend to the beads (3.4.1) are not laid substantially at 90° to the centre line of the tread (3.4.4) across the complete cross section of the tyre

3.4 Terms relating to main components

3.4.1

bead

part of the tyre shaped to fit the rim (3.7.12) and having a core made of one or several essentially inextensible strands with the plies wrapped around the core

3.4.2

sidewall

portion of the tyre between the tread (3.4.4) and the bead (3.4.1)