



BSI Standards Publication

## Motorcycle tyres — Test methods for verifying tyre capabilities

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## National foreword

This British Standard is the UK implementation of ISO 10231:2022. It supersedes BS ISO 10231:2003+A1:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AUE/4, Tyres and wheels for motor vehicles.

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

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**Motorcycle tyres — Test methods for  
verifying tyre capabilities**

*Pneumatiques pour motocycles — Méthodes d'essai pour la  
vérification de l'aptitude des pneumatiques*



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# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Test equipment</b> .....	<b>2</b>
<b>5 Testing</b> .....	<b>3</b>
5.1 Strength test.....	3
5.1.1 General.....	3
5.1.2 Preparation of tyre.....	3
5.1.3 Test procedure.....	3
5.2 Endurance test.....	4
5.2.1 Preparation of tyre.....	4
5.2.2 Test procedure.....	4
5.3 High-speed test.....	5
5.3.1 General.....	5
5.3.2 Preparation of tyre.....	5
5.3.3 Test method.....	5
5.4 Centrifugal growth test.....	6
5.4.1 General.....	6
5.4.2 Preparation of tyre.....	6
5.4.3 Test procedure.....	6
<b>6 Requirements</b> .....	<b>7</b>
6.1 Test sample.....	7
6.2 Strength test.....	7
6.3 Endurance test.....	8
6.4 High-speed test.....	8
6.5 Centrifugal growth test.....	8
<b>Annex A (normative) Enveloping curve for contour of tyre for centrifugal growth test</b> .....	<b>9</b>
<b>Annex B (informative) Tyres suitable for speeds over 240 km/h</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>11</b>

## 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 10, *Cycle, moped, motorcycle tyres and rims*.

This fourth edition cancels and replaces the third edition (ISO 10231:2003), which has been technically revised. It also incorporates the Amendment ISO 10231:2003/Amd 1:2015.

The main changes are as follows:

- definitions have been clarified.
- strength and high-speed tests have been revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Motorcycle tyres — Test methods for verifying tyre capabilities

## 1 Scope

This document specifies test methods for verifying the capabilities of tyres for motorcycles. Of the test methods presented, only some can be required depending on the type of tyre to be tested.

The tests are carried out in the laboratory under controlled conditions. This document includes a strength test for assessing the capability of the tyre structure, with respect to breaking energy. A second test, the endurance test, assesses the resistance of the tyre with respect to service at full load and moderate speed over long distances. The third test, the high-speed test, assesses the capability of the tyre as related to service at the maximum speed capability of the tyre. The centrifugal growth test assesses the maximum growth of the tyre under the influence of centrifugal forces at the maximum speed capability of the tyre.

The test methods presented in this document are not intended for gradation of tyre performance or quality levels.

This document is applicable to all motorcycle tyres.

## 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 4223-1, *Definitions of some terms used in the tyre industry — Part 1: Pneumatic tyres*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4223-1 and the following apply.

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

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

### 3.1

#### **bead separation**

breakdown of bond between components in the bead area

### 3.2

#### **belt separation**

parting of rubber compound between belt layers or between belts and plies

### 3.3

#### **chunking**

breaking away of pieces of the tread

### 3.4

#### **cord separation**

cord parting from adjacent rubber compounds