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Rubber, vulcanized or thermoplastic — Determination of resistance to abrasion using a driven, vertical abrasive disc

Caoutchouc, vulcanisé ou thermoplastique — Détermination de la résistance à l'abrasion au moyen d'un disque abrasif vertical, motorisé

Reference number
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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This second edition cancels and replaces the first edition (ISO 23233:2009), which has been technically revised to update the dimensions of the test piece and the test conditions.

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Rubber, vulcanized or thermoplastic — Determination of resistance to abrasion using a driven, vertical abrasive disc

WARNING 1 — Persons using this International Standard should be familiar with normal laboratory practice. This International Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

WARNING 2 — Certain procedures specified in this International Standard may involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

This International Standard specifies a method for the determination of the resistance of rubber to abrasion using a driven, vertical abrasive disc.

The loss in mass on abrasion is determined through the slip caused by setting different slip angles and rotational speeds between a wheel-shaped rubber test piece and an abrasive disc which are rotating in planes at right angles to each other and pressed against each other with a specified load. The test result can be reported as the loss in mass per unit running distance and/or as an abrasion resistance index compared to a reference compound.

This International Standard is applicable to comparative testing, quality control, specification compliance testing, referee testing and research and development work.

As the test device described is capable of setting each abrasion parameter, such as slip angle, rotational speed of the abrasive disc and load, independently, the method is suitable for carrying out a wide range of abrasion tests for various rubber products, especially tyres.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 525, *Bonded abrasive products — General requirements*

ISO 8486-1, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220*

ISO 23529, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

3 Terms and definitions

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

3.1
abrasion
loss of material from a surface due to frictional forces

[SOURCE: ISO 23794:2015, 3.1]

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