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Flexible cellular polymeric materials — Determination of compression set

Matériaux polymères alvéolaires souples — Détermination de la déformation rémanente après compression

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Foreword

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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 45, *Rubber and rubber products,* Subcommittee SC 4, *Products other than hoses.*

This fourth edition cancels and replaces the third edition (ISO 1856:2000), which has been technically revised. It also incorporates the Amendment ISO 1856:2000/Amd.1:2007.

The main changes compared to the previous edition are as follows:

— an additional normative reference has been added;

— in 6.1, an additional requirement for the test pieces has been added;

— in 6.4, conditioning of the test pieces has been amended;

— temperature tolerance for method A and B has been added.

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Flexible cellular polymeric materials — Determination of compression set

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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.

1 Scope

This document specifies three methods for determining the compression set of flexible cellular materials.

This document applies to latex and polyurethane foams of thickness greater than 2 mm.

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 1923, *Cellular plastics and rubbers — Determination of linear dimensions*

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.

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
compression set
difference between the initial thickness and the final thickness of a test piece of the cellular material after compression for a given time at a given temperature and after a given recovery time

Note 1 to entry: The difference is referred to the initial thickness.

4 Principle

A test piece is maintained for a specified time at a specified temperature under constant deflection and the effect on the thickness of the test piece noted after release.

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