BS EN ISO 1856:2018

BSI Standards Publication

Flexible cellular polymeric materials - Determination of compression set

National foreword

This British Standard is the UK implementation of EN ISO 1856:2018. It is identical to ISO 1856:2018. It supersedes BS EN ISO 1856:2001, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/24, Testing of rigid and flexible cellular materials.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 92530 6

ICS 83.100

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2018.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 1856

August 2018

ICS 83.100

Supersedes EN ISO 1856:2000,

English Version

Flexible cellular polymeric materials - Determination of compression set (ISO 1856:2018)

Matériaux polymères alvéolaires souples - Détermination de la déformation rémanente après compression (ISO 1856:2018)

Weich-elastische polymere Schaumstoffe - Bestimmung des Druckverformungsrestes (ISO 1856:2018)

This European Standard was approved by CEN on 24 July 2018.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 1856:2018) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 249 “Plastics” the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 1856:2000.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 1856:2018 has been approved by CEN as EN ISO 1856:2018 without any modification.

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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 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.

INTERNATIONAL STANDARD **ISO 1856:2018**

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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.