

BS EN ISO 5999:2013



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Flexible cellular polymeric materials — Polyurethane foam for load-bearing applications excluding carpet underlay — Specification

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National foreword

This British Standard is the UK implementation of EN ISO 5999:2013. It supersedes BS EN ISO 5999:2007 which is withdrawn.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.

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English Version

Flexible cellular polymeric materials - Polyurethane foam for
load-bearing applications excluding carpet underlay -
Specification (ISO 5999:2013)

Matériaux polymères alvéolaires souples - Mousse de
polyuréthane pour utilisations soumises à des charges, à
l'exclusion des revers de tapis - Spécifications (ISO
5999:2013)

Weich-elastische Polymerschaumstoffe -
Polyurethanschaumstoffe für Polsterzwecke mit Ausnahme
von Teppichunterlagen - Anforderungen (ISO 5999:2013)

This European Standard was approved by CEN on 26 July 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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

Foreword

This document (EN ISO 5999:2013) 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 March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

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

This document supersedes EN ISO 5999:2007.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 5999:2013 has been approved by CEN as EN ISO 5999:2013 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. 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.

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

This third edition cancels and replaces the second edition (ISO 5999:2007), which has been technically revised.

Flexible cellular polymeric materials — Polyurethane foam for load-bearing applications excluding carpet underlay — Specification

1 Scope

This International Standard specifies requirements for flexible load-bearing polyurethane foam of the polyether type.

It is applicable to flexible polyurethane cellular materials manufactured in block, sheet and strip form, in moulded and fabricated shapes, and as reconstituted material, used for load-bearing applications in general, but excluding carpet backing and underlay. It, thus, primarily relates to the quality of polyurethane foam used for comfort cushioning purposes.

The foam is classified according to the type of foam, the performance during a fatigue test, and the indentation hardness index used as a means of grading materials.

This International Standard is not applicable to polyurethane foams foamed in place or to foams for use in heat-welded systems unless for load-bearing purposes.

Recommended applications for the range of flexible polyurethane foams covered by this International Standard are listed in [Annex A](#).

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 845, *Cellular plastics and rubbers — Determination of apparent density*

ISO 1798, *Flexible cellular polymeric materials — Determination of tensile strength and elongation at break*

ISO 1856, *Flexible cellular polymeric materials — Determination of compression set*

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

ISO 2439:2008, *Flexible cellular polymeric materials — Determination of hardness (indentation technique)*

ISO 2440, *Flexible and rigid cellular polymeric materials — Accelerated ageing tests*

ISO 3385, *Flexible cellular polymeric materials — Determination of fatigue by constant-load pounding*

ISO 3582, *Flexible cellular polymeric materials — Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame*

ISO 3795, *Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials*

ISO 8307, *Flexible cellular polymeric materials — Determination of resilience by ball rebound*

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