



SLOVENSKI STANDARD
SIST EN ISO 5999:2004
01-oktober-2004

Polimerni materiali, mehke pene – Poliuretanska pena za nosilne aplikacije, razen za podlogo preprog - Specifikacija (ISO 5999:1982)

Polymeric materials, cellular flexible - Polyurethane foam for load-bearing applications excluding carpet underlay - Specification (ISO 5999:1982)

Weich-elastische Polymerschaumstoffe - Polyurethanschaumstoffe für Polsterzwecke mit Ausnahme von Teppichunterlagen - Anforderungen (ISO 5999:1982)

iTeh STANDARD PREVIEW

Matériaux polymères alvéolaires souples - Mousse de polyuréthane pour utilisations soumises à des charges, à l'exclusion des revers de tapis - Spécifications (ISO 5999:1982)

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Ta slovenski standard je istoveten z: EN ISO 5999:2004

ICS:

83.100

Penjeni polimeri

Cellular materials

SIST EN ISO 5999:2004

en,fr,de

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ICS 83.100

English version

Polymeric materials, cellular flexible - Polyurethane foam for
load-bearing applications excluding carpet underlay -
Specification (ISO 5999:1982)

Matériaux polymères alvéolaires souples - Mousse de
polyuréthane pour utilisations soumises à des charges, à
l'exclusion des revers de tapis - Spécifications (ISO
5999:1982)

This European Standard was approved by CEN on 17 June 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of ISO 5999:1982 has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 5999:2004 by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

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

Endorsement notice

The text of ISO 5999:1982 has been approved by CEN as EN ISO 5999:2004 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

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Annex ZA (normative)

Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 1798	1997	Flexible cellular polymeric materials - Determination of tensile strength and elongation at break	EN ISO 1798	1999
ISO 1856	2000	Flexible cellular polymeric materials - Determination of compression set	EN ISO 1856	2000
ISO 2439	1997	Flexible cellular polymeric materials - Determination of hardness (indentation technique)	EN ISO 2439	2000
ISO 2440	1997	Flexible cellular polymeric materials - Determination of hardness (indentation technique)	EN ISO 2440	1999
ISO 3385	1989	Flexible cellular polymeric materials - Determination of fatigue by constant-load pounding	EN ISO 3385	1995
ISO 3582	2000	Flexible cellular polymeric materials - Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame	EN ISO 3582	2000

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International Standard



5999

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Polymeric materials, cellular flexible — Polyurethane foam for load-bearing applications excluding carpet underlay — Specification

Matériaux polymères alvéolaires souples — Mousse de polyuréthane pour utilisations soumises à des charges, à l'exclusion des revers de tapis — Spécifications

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UDC 678.744.5-405.8 : 678.01 : 539.37

Ref. No. ISO 5999-1982 (E)

Descriptors : cellular materials, flexible cellular materials, polyurethane, foam, classifications, specifications, dimensions, dimensional tolerances, characteristics, marking.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5999 was developed by Technical Committee ISO/TC 45, *Rubber and rubber products*, and was circulated to the member bodies in September 1979.

It has been approved by the member bodies of the following countries :

Brazil	Libyan Arab Jamahiriya	Thailand
Canada	Poland	Turkey
Czechoslovakia	Romania	United Kingdom
Denmark	South Africa, Rep. of	USA
Egypt, Arab Rep. of	Spain	USSR
India	Sweden	
Italy	Switzerland	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Belgium
France
Germany, F. R.
Netherlands

Polymeric materials, cellular flexible — Polyurethane foam for load-bearing applications excluding carpet underlay — Specification

1 Scope and field of application

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 performance during a fatigue test, indentation hardness being used as a secondary means of grading material.

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 B.

2 References

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

ISO 1856, *Polymeric materials, cellular flexible — Determination of compression set.*

ISO 2439, *Polymeric materials, cellular flexible — Determination of hardness (indentation technique).*

ISO 2440, *Flexible cellular materials — Accelerated ageing tests.*

ISO 3385, *Flexible cellular materials — Test for dynamic fatigue by constant load pounding.*

ISO 3582, *Cellular plastic and cellular rubber materials — Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame.*

ISO 3795, *Road vehicles — Determination of burning behaviour of interior materials for motor vehicles.*

3 Classification

3.1 Type

For the purpose of this International Standard, flexible polyurethane foams are classified according to type as follows :

- type B : Block foam, slabstock or contour cut (conventional);
- type CB : Block foam [high resilience (previously known as "cold cure")];
- type M : Moulded (conventional);
- type CM : Moulded [high resilience (previously known as "cold cure")];
- type RE : Reconstituted or bonded.

3.2 Class

Materials of the above types (except type RE) are sub-divided into five classes based on performance in the constant load pounding test described in ISO 3385. The five classes and their intended types of service are given in table 1.

Table 1 — Classes and intended types of service

Class	Type of service
X	Exceptionally severe
V	Very severe
S	Severe
A	Average
L	Light

NOTE — Further details of recommended applications are given in annex B.

Classes X, V, S, A and L are defined by the maximum indentation hardness loss over the range of hardness index values from 0 to 650 N, as shown in figures 1 and 2, provided that the requirements for physical properties specified in table 6 are met.

The classification is based on the lowest level achieved in any of the tests.

NOTE — Reconstituted foam (type RE), because of its good fatigue properties combined with poorer compression set, tensile strength and elongation at break properties, is specified separately in table 7. It is generally used as thin, firm padding or to provide reinforcement for the other foams.