

**Flexible cellular polymeric materials -
Determination of hardness (indentation
technique)**

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of hardness (indentation technique)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 2439:2001 sisaldab Euroopa standardi EN ISO 2439:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.02.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 2439:2001 consists of the English text of the European standard EN ISO 2439:2000.</p> <p>This document is endorsed on 16.02.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This standard specifies three methods for determining the indentation hardness of flexible cellular materials: - Method A = Indentation hardness index - Method B = Indentation hardness characteristics - Method C = Indentation hardness check.</p>	<p>Scope: This standard specifies three methods for determining the indentation hardness of flexible cellular materials: - Method A = Indentation hardness index - Method B = Indentation hardness characteristics - Method C = Indentation hardness check.</p>
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ICS 83.100

Võtmesõnad: cellular materials, cellular plastics, foam rubber, hardness test, test

English version

Flexible cellular polymeric materials

Determination of hardness (indentation technique)

(ISO 2439 : 1997, including Technical Corrigendum 1 : 1998)

Matériaux polymères alvéolaires
souples – Détermination de la dureté
(technique par indentation)
(ISO 2439 : 1997, Rectificatif Techni-
que 1 : 1998 inclus)

Weich-elastische polymere Schaum-
stoffe – Bestimmung der Härte
(Eindruckverfahren) (ISO 2439 : 1997,
einschließlich Technische Korrek-
tur 1 : 1998)

This European Standard was approved by CEN on 2000-09-08.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 2439 : 1997 Flexible cellular polymeric materials – Determination of hardness (indentation technique), which was prepared by ISO/TC 45 'Rubber and rubber products' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics', the Secretariat of which is held by IBN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by March 2001 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 2439 : 1997, including Technical Corrigendum 1 : 1998, was approved by CEN as a European Standard without any modification.

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

1 Scope

This International Standard specifies three methods for determining the indentation hardness of flexible cellular materials:

method A (indentation hardness index), which gives a single indentation measurement for laboratory test purposes;

method B (indentation hardness characteristics), which provides information about the shape of the hardness indentation curve;

method C (indentation hardness check), which is a quick procedure suitable for quality control testing.

The methods are applicable only to latex, urethane foam and PVC foam of the open cell type.

NOTE — The indentation hardness of flexible cellular materials is a measure of their load-bearing properties. The methods specified can be used for testing finished articles and for the characterization of bulk material.

The results obtained by these methods relate only to the test conditions specified and cannot, in general, be used directly for design purposes.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 471:1995, *Rubber — Temperatures, humidities and times for conditioning and testing*.

3 Definition

For the purposes of this International Standard, the following definition applies:

3.1 Indentation hardness

The total force, in newtons, required to produce, under specified conditions, a specified indentation of a standard test piece with a standard apparatus using the test procedure specified below.

4 Principle

The forces required to produce specified indentations under specified conditions are measured.