



NSAI
Standards

Irish Standard
I.S. EN ISO 2440:2000

Flexible and rigid cellular polymeric materials - Accelerated ageing tests (ISO 2440:1997)

I.S. EN ISO 2440:2000

Incorporating amendments/corrigenda issued since publication:

EN ISO 2440:1999/A1:2010

This document replaces:

This document is based on:
EN ISO 2440:1999

Published:
17 November, 1999

This document was published
under the authority of the NSAI
and comes into effect on:
24 March, 2000

ICS number:
83.100

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ICS 83.100

English Version

Flexible and rigid cellular polymeric materials - Accelerated ageing tests - Amendment 1 (ISO 2440:1997/Amd 1:2010)

Matériaux polymères alvéolaires souples et rigides - Essais de vieillissement accéléré - Amendement 1 (ISO 2440:1997/Amd 1:2010)

Weich- und Hartschaumstoffe- Schnellalterungsprüfung - Änderung 1 (ISO 2440:1997/Amd 1:2010)

This amendment A1 modifies the European Standard EN ISO 2440:1999; it was approved by CEN on 6 February 2010.

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Foreword

This document (EN ISO 2440:1999/A1:2010) 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 Amendment to the European Standard EN ISO 2440:1999 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.

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Endorsement notice

The text of ISO 2440:1997/Amd 1:2010 has been approved by CEN as a EN ISO 2440:1999/A1:2010 without any modification.

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I.S. EN ISO 2440:2000
**INTERNATIONAL
STANDARD**

**ISO
2440**

Third edition
1997-09-15

AMENDMENT 1
2010-02-15

**Flexible and rigid cellular polymeric
materials — Accelerated ageing tests**

AMENDMENT 1

*Matériaux polymères alvéolaires souples et rigides — Essais de
vieillissement accéléré*

AMENDEMENT 1



Reference number
ISO 2440:1997/Amd.1:2010(E)

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Published in Switzerland

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

Amendment 1 to ISO 2440:1997 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

EUROPEAN STANDARD

EN ISO 2440

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1999

ICS 83.100

English version

Flexible and rigid cellular polymeric materials - Accelerated ageing tests (ISO 2440:1997)

Matériaux polymères alvéolaires souples et rigides - Essais de vieillissement accéléré (ISO 2440:1997)

Weich- und Hartschaumstoffe - Schnellalterungsprüfung (ISO 2440:1997)

This European Standard was approved by CEN on 21 June 1998.

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



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Foreword

The text of the International Standard from Technical Committee ISO/TC 45 "Rubber and rubber products" of the International Organization for Standardization (ISO) has been taken over as an European Standard 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 May 2000, and conflicting national standards shall be withdrawn at the latest by May 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 2440:1997 has been approved by CEN as a European Standard without any modification.

I.S. EN ISO 2440:2000

INTERNATIONAL STANDARD

ISO 2440

Third edition
1997-09-15

Flexible and rigid cellular polymeric materials — Accelerated ageing tests

*Matériaux polymères alvéolaires souples et rigides — Essais
de vieillissement accéléré*



Reference number
ISO 2440:1997(E)

ISO 2440:1997(E)

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International Standard ISO 2440 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

This third edition cancels and replaces the second edition (ISO 2440:1983), which has been technically revised.

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Printed in Switzerland

Flexible and rigid cellular polymeric materials – Accelerated ageing tests

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, for flexible and rigid cellular polymeric materials, laboratory procedures which are intended to imitate the effects of naturally occurring reactions such as oxidation or hydrolysis by humidity. The physical properties of interest are measured before and after the application of the specified treatments.

Test conditions are only given for open cellular latex, both open- and closed-cell polyurethane foams, and closed-cell polyolefin foams. Conditions for other materials will be added as required.

The effect of the ageing procedures on any of the physical properties of the material may be examined, but those normally tested are either the elongation and tensile properties, or the compression or indentation hardness properties.

These tests do not necessarily correlate either with service behaviour or with ageing by exposure to light.

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 Apparatus

3.1 For heat ageing

3.1.1 Oven, with forced circulation, capable of maintaining the required temperature to within ± 1 °C.

NOTE — It is recommended that a device be used to record the temperature, preferably continuously.

3.2 For humidity ageing

3.2.1 Ageing apparatus, of such a size that the total volume of the test pieces does not exceed 10 % of the free air space, and such that the test pieces are free of strain, freely exposed to the ageing atmosphere on all sides and not exposed to light.

3.2.2 Steam autoclave or similar vessel, capable of maintaining the required temperature to within ± 1 °C and of withstanding absolute pressures up to 300 kPa.

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