

STN	Flexibilné a tuhé ľahčené polymérne materiály Skúšky urýchleným starnutím (ISO 2440: 2025)	STN EN ISO 2440 64 0775
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Flexible and rigid cellular polymeric materials - Accelerated ageing tests (ISO 2440:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/25

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English Version

**Flexible and rigid cellular polymeric materials -
Accelerated ageing tests (ISO 2440:2025)**

Matériaux polymères alvéolaires souples et rigides -
Essais de vieillissement accéléré (ISO 2440:2025)

Weich-elastische polymere Schaumstoffe und
Hartschäume - Schnellalterungsprüfung (ISO
2440:2025)

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 2440:2025) 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 SIS.

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of an identical text or by endorsement, at the latest by January 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

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Endorsement notice

The text of ISO 2440:2025 has been approved by CEN as EN ISO 2440:2025 without any modification.



International Standard

ISO 2440

Flexible and rigid cellular polymeric materials — Accelerated ageing tests

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

**Fifth edition
2025-07**

ISO 2440:2025(en)



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Contents		Page
Foreword.....		iv
Introduction.....		v
1	Scope.....	1
2	Normative references.....	1
3	Terms and definitions.....	1
4	Apparatus.....	2
4.1	For dry heat ageing.....	2
4.2	For humidity ageing.....	2
4.3	For physical property measurements.....	2
5	Test pieces.....	2
5.1	Number, size and shape.....	2
5.2	Conditioning.....	2
6	Procedure.....	2
6.1	General.....	2
6.2	Dry heat ageing.....	3
6.2.1	Temperature.....	3
6.2.2	Duration of ageing.....	3
6.3	Humidity ageing.....	3
6.3.1	Humidity.....	3
6.3.2	Temperatures and duration of ageing.....	3
6.4	Reconditioning.....	4
7	Calculation and expression of results.....	4
7.1	Calculation.....	4
7.2	Validity.....	4
7.3	Expression of results.....	4
8	Precision data.....	4
9	Test report.....	4
Annex A (informative) Method for verification of the validity of ageing results.....		6
Annex B (informative) Precision data.....		7
Bibliography.....		11

ISO 2440:2025(en)

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 document 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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This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (others than hoses)*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 2440:2019) which has been technically revised.

The main changes are as follows:

- addition of [subclause 7.2](#);
- addition of [Clause 9](#);
- addition of a method for verification in [Annex A](#);
- addition of precision data in [Annex B](#).

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ISO 2440:2025(en)

Introduction

The measurement of ageing effects, either by oxidation or hydrolysis by humidity, is used to assess the long-term behaviour of cellular polymeric materials under laboratory conditions. The physical properties of interest are measured before and after the application of the specified treatments.

Test conditions are given for open cellular latex, open- and closed-cell polyurethane foams, and closed-cell polyolefin foams.

The effect of the ageing procedures on any of the physical properties of the material can 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.

If desired, the ageing conditions contained in this document can be applied to composite structures containing any of the above types of cellular material. This can be helpful in the investigation of possible interactions between cellular materials and other substrates. Composite constructions can be in the form of complete finished products or representative small specimens cut there-from.

Flexible and rigid cellular polymeric materials — Accelerated ageing tests

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 practices and to determine the applicability of any other restrictions.

1 Scope

This document specifies laboratory procedures which are intended to imitate the effects of naturally occurring reactions such as oxidation or hydrolysis by humidity for flexible and rigid cellular polymeric materials.

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

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