

Thermal insulation products - Determination of settlement - Part 1: Loose-fill insulation for ventilated attics simulating humidity and temperature cycling (ISO 18393-1:2023)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 18393-1:2023 sisaldab Euroopa standardi EN ISO 18393-1:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.12.2023.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 18393-1:2023 consists of the English text of the European standard EN ISO 18393-1:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 13.12.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN ISO 18393-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Thermal insulation products - Determination of settlement
- Part 1: Loose-fill insulation for ventilated attics
simulating humidity and temperature cycling (ISO 18393-
1:2023)

Produits isolants thermiques - Détermination du tassement - Partie 1: Isolant en vrac pour combles ventilés, cyclage en température et humidité (ISO 18393-1:2023)

Wärmedämmprodukte - Bestimmung der Alterung durch Setzung - Teil 1: Eingeblassene lose Wärmedämmstoffe für belüftete Dachgeschosse, zyklische Luftfeuchte- und Temperaturbeanspruchungen (ISO 18393-1:2023)

This European Standard was approved by CEN on 18 November 2023.

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

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

European foreword

This document (EN ISO 18393-1:2023) has been prepared by Technical Committee ISO/TC 163 "Thermal performance and energy use in the built environment" in collaboration with Technical Committee CEN/TC 88 "Thermal insulating materials and products" the secretariat of which is held by DIN.

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 June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

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

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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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 18393-1:2023 has been approved by CEN as EN ISO 18393-1:2023 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 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 1, *Test and measurement methods*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 88, *Thermal insulating materials and products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 18393-1:2012), which has been technically revised.

The main changes are as follows:

- [Clause 5.1](#): change of the size of specimen container;
- [Clause 7](#): change of the condition of the test temperature, moisture and duration;
- [Clause 8](#): change of calculation of test results.

A list of all parts in the ISO 18393 series can be found on the ISO website.

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Thermal insulation products — Determination of settlement —

Part 1:

Loose-fill insulation for ventilated attics simulating humidity and temperature cycling

1 Scope

This document specifies a test method for the determination of settlement of loose-fill insulation applied horizontally in ventilated attics. This test method measures the effects of humidity and temperature cycling.

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 12570, *Hygrothermal performance of building materials and products — Determination of moisture content by drying at elevated temperature*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

ventilated attic

ventilated loft space of a building enclosed between the roof and the ceiling

Note 1 to entry: A ventilated attic may also include an unventilated space sealed by a low vapour resistance roof tile underlay.

3.2

settlement

decrease, with time, of installed insulation thickness in lofts

Note 1 to entry: Blown loose-fill insulation can be subject to settlement.

Note 2 to entry: Settlement is expressed as a percentage of the initial installed thickness or installed height.

3.3

installed density

density of the specimen just after blowing before conditioning