



NSAI
Standards

Irish Standard
I.S. EN ISO 16535:2019

Thermal insulating products for building applications - Determination of long-term water absorption by immersion (ISO 16535:2019)

I.S. EN ISO 16535:2019

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National Foreword

I.S. EN ISO 16535:2019 is the adopted Irish version of the European Document EN ISO 16535:2019, Thermal insulating products for building applications - Determination of long-term water absorption by immersion (ISO 16535:2019)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

EN ISO 16535

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2019

ICS 91.100.60

Supersedes EN 12087:2013

English Version

**Thermal insulating products for building applications -
Determination of long-term water absorption by
immersion (ISO 16535:2019)**

Produits isolants thermiques destinés aux applications
du bâtiment - Détermination de l'absorption d'eau à
long terme par immersion (ISO 16535:2019)

Wärmedämmstoffe für das Bauwesen - Bestimmung
der Wasseraufnahme bei langzeitigem Eintauchen (ISO
16535:2019)

This European Standard was approved by CEN on 21 June 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN ISO 16535:2019) 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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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.

This document supersedes EN 12087:2013.

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, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 16535:2019 has been approved by CEN as EN ISO 16535:2019 without any modification.

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INTERNATIONAL STANDARD

**ISO
16535**

Second edition
2019-06

Thermal insulating products for building applications — Determination of long-term water absorption by immersion

*Produits isolants thermiques destinés aux applications du bâtiment —
Détermination de l'absorption d'eau à long terme par immersion*



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ISO 16535:2019(E)

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

This second edition cancels and replaces the first edition (ISO 16535:2012), which has been technically revised. The main changes compared to the previous edition are as follows:

— The content in 5.3, 6.4, 7.1 and 10 has been revised to reflect the conditions for tropical countries.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Thermal insulating products for building applications — Determination of long-term water absorption by immersion

1 Scope

This document specifies the equipment and procedures for determining the long-term water absorption of test specimens. It is applicable to thermal insulating products.

This document specifies two methods:

- Method 1: Partial immersion;
- Method 2: Total immersion.

The long-term water absorption by partial immersion is intended to simulate the water absorption caused by long-term water exposure.

The long-term water absorption by total immersion is not directly related to the conditions on site, but has been recognized as a relevant condition of test for some products in some applications.

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 29768, *Thermal insulating products for building applications — Determination of linear dimensions of test specimens*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Principle

4.1 Method 1: Partial immersion

The long-term water absorption by partial immersion is determined by measuring the change in mass of a test specimen, the lower part of which is in contact with water for a period of 28 days.

The excess water adhering to the surface, not absorbed by the test specimen, is removed by drainage in method 1A or taken into account by deduction of the initial water uptake in method 1B.

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