
**Thermal insulating products
for building applications —
Determination of short-term water
absorption by partial immersion**

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

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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 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 29767:2008), which has been technically revised. It also incorporates the Amendment ISO 29767:2008/Amd.1:2014. The main changes compared to the previous edition are as follows:

- The content in [5.3](#), [6.4](#), [7.1](#) and Clause [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 short-term water absorption by partial immersion

1 Scope

This document specifies the equipment and procedures for determining the short-term water absorption of specimens by partial immersion. It is applicable to thermal insulating products.

NOTE It is intended to simulate the water absorption caused by a 24 h raining period during construction work.

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

A test specimen is placed with its lower part in water, for a period of 24 h, and its change in mass is measured.

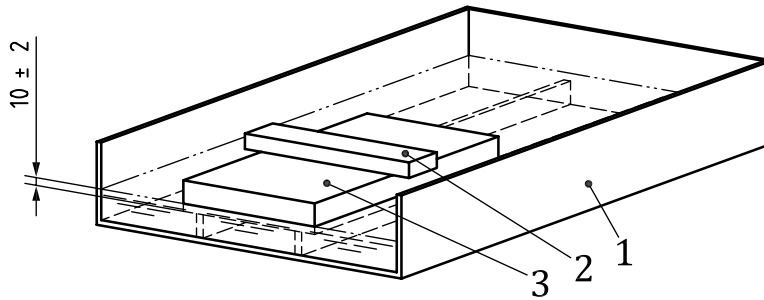
The excess water adhering to the surface but not absorbed by the test specimen is removed by drainage (method A) or taken into account by deduction of the initial water uptake (method B).

5 Apparatus

5.1 Balance, capable of determining the mass of a specimen to an accuracy of 0,1 g.

5.2 Water tank, with a device for keeping the water level constant to within ± 2 mm, and a device to keep the test specimen in position. The device to keep the test specimen in position shall not cover more

than 15 % of the cross-sectional area of the test specimen, which is exposed to water. An example is shown in [Figure 1](#).



Key

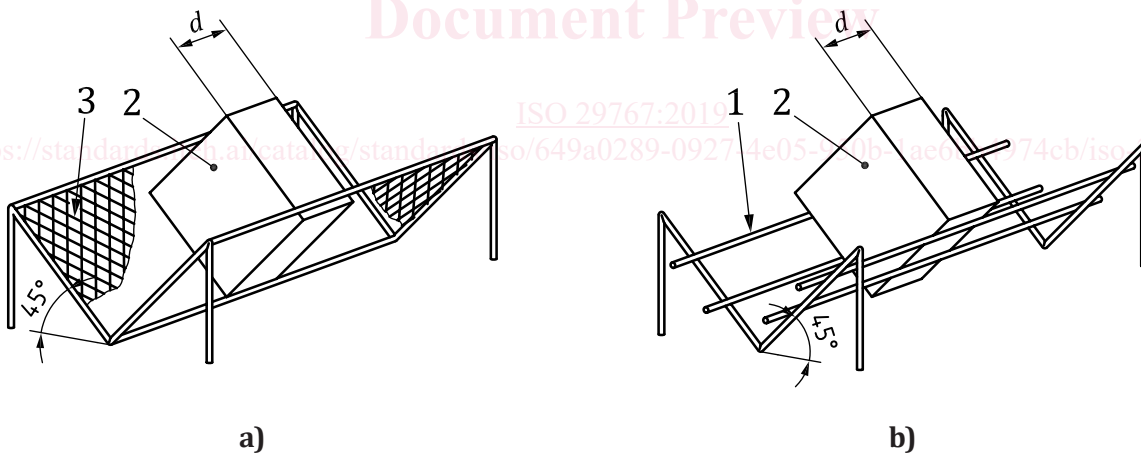
- 1 water tank
- 2 load to keep the specimen in position
- 3 test specimen

Figure 1 — Examples of partial immersion test device

5.3 Tap water, adjusted to a temperature of $(23 \pm 5) \text{ }^\circ\text{C}$. In case of dispute, deionised water shall be used.

In tropical countries, different conditions and testing conditions can be relevant. In such cases the temperature shall be $(27 \pm 5) \text{ }^\circ\text{C}$, and this shall be stated in the test report.

5.4 Equipment for drainage (examples are shown in [Figures 2 a\)](#) and [2 b\)](#)).



Key

- 1 stainless steel mesh
- 2 test specimen
- 3 perforated stainless steel

Figure 2 — Examples of suitable equipment for drainage

6 Test specimens

6.1 Dimensions of test specimens

The thickness of test specimens shall be equal to the original product thickness.