Hygrothermal performance of building materials and products - Determination of water vapour transmission properties - Cup method (ISO 12572:2016 + ISO 12572:2016/Amd 1:2024)

EVS • EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 12572:2016 +A1:2024 sisaldab Euroopa standardi EN ISO 12572:2016 ja selle muudatuse A1:2024 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 12572:2016+A1:2024 consists of the English text of the European standard EN ISO 12572:2016 and its amendment A1:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.08.2016, muudatus A1 16.10.2024.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 24.08.2016, for A1 16.10.2024.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega ⟨A1⟩ ⟨A1⟩. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags ⟨A1⟩ ⟨A1⟩. The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.120.10

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 12572 + A1

August 2016, October 2024

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Supersedes EN ISO 12572:2001

English Version

Hygrothermal performance of building materials and products - Determination of water vapour transmission properties - Cup method (ISO 12572:2016 + ISO 12572:2016/Amd 1:2024)

Performance hygrothermique des matériaux et produits pour le bâtiment - Détermination des propriétés de transmission de la vapeur d'eau - Méthode de la coupelle (ISO 12572:2016 + ISO 12572:2016/Amd 1:2024)

Wärme- und feuchtetechnisches Verhalten von Baustoffen und Bauprodukten - Bestimmung der Wasserdampfdurchlässigkeit - Verfahren mit einem Prüfgefäß (ISO 12572:2016 + ISO 12572:2016/Amd 1:2024)

This European Standard was approved by CEN on 16 July 2016. Amendment A1 was approved by CEN on 1 September 2024.

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

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

Ref. No. EN ISO 12572:2016 E
+ EN ISO 12572:2016/A1:2024 E

European foreword

This document (EN ISO 12572:2016) has been prepared by Technical Committee CEN/TC 89 “Thermal performance of buildings and building components” the secretariat of which is held by SIS, in collaboration with Technical Committee ISO/TC 163 “Thermal performance and energy use in the built environment”.

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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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

This document supersedes EN ISO 12572:2001.

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

Endorsement notice

The text of ISO 12572:2016 has been approved by CEN as EN ISO 12572:2016 without any modification.

A1 Amendment A1 European foreword

This document (EN ISO 12572:2016/A1:2024) 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 89 “Thermal performance of buildings and building components” the secretariat of which is held by SIS.

This Amendment to the European Standard EN ISO 12572:2016 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2025, and conflicting national standards shall be withdrawn at the latest by April 2025.

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Endorsement notice

The text of ISO 12572:2016/Amd 1:2024 has been approved by CEN as EN ISO 12572:2016/A1:2024 without any modification. A1

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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).

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ISO 12572 was prepared by the European Committee Standardization (CEN) Technical Committee CEN/TC 89, *Thermal performance of buildings and building components*, in collaboration with ISO Technical Committee ISO/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 12572:2001), which has been technically revised with the following changes:

— addition of insulation materials in the Scope;

— addition of e) humidity chamber in Clause 5;

— addition of requirements regarding thickness of test specimen to measure the permeability of core materials in 6.2.3;

— change of specimen area size in 6.3;

— addition of requirements for storage time and relative humidity for condition D in 6.4;

— new clause with requirements in 6.5;

— change of requirements for temperature and relative humidity for test conditions in 7.1;

— change of the calculation of mass change rate in 8.1;

— removal of 9.8.

Amendment A1 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.

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Hygrothermal performance of building materials and products — Determination of water vapour transmission properties — Cup method

1 Scope

This document specifies a method based on cup tests for determining the water vapour permeance of building products and the water vapour permeability of building materials under isothermal conditions. Different sets of test conditions are specified.

The general principles are applicable to all hygroscopic and non-hygroscopic building materials and products, including insulation materials and including those with facings and integral skins. Annexes give details of test methods suitable for different material types.

The results obtained by this method are suitable for design purposes, production control and for inclusion in product specifications.

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.

There are no normative references in this document.

3 Terms, definitions, symbols, units and subscripts

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9346 and the following apply.

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 http://www.iso.org/obp

3.1.1
density of water vapour flow rate
mass of water vapour transferred through the specimen per area and per time

3.1.2
homogeneous material
material with properties likely to affect the transmission of water vapour which do not vary on a macroscopic scale

3.1.3
impermeable material
material with a measured *water vapour diffusion-equivalent air layer thickness* (3.1.8) greater than 1 500 m