

საქართველოს სტანდარტი

სსკ: 91.120.10

სამშენებლო მასალები და პროდუქტები - ჰიგროთერმული თვისებები -
გაფორმებული საპროექტო მნიშვნელობები და პროცედურები
დეკლარირებული და საპროექტო თერმული მნიშვნელობების დასადგენად
(ისო 10456:2007)

სსტ ენ ისო 10456:2007/2023

საინფორმაციო მონაცემები

1 მიღებულია და დაშვებულია სამოქმედოდ: სსიპ-საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს გენერალური დირექტორის 01/05/2023 წლის № 47 განკარგულებით

2 მიღებულია „თავფურცლის“ თარგმნის მეთოდით: სტანდარტიზაციის ევროპული კომიტეტის (ენ) სტანდარტი ენ ისო 10456:2007 „სამშენებლო მასალები და პროდუქტები - ჰიგროთერმული თვისებები - გაფორმებული საპროექტო მნიშვნელობები და პროცედურები დეკლარირებული და საპროექტო თერმული მნიშვნელობების დასადგენად (ისო 10456:2007)“

3 პირველად

4 რეგისტრირებულია: სსიპ-საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 01/05/2023 წლის №268-1.3-028936

წინამდებარე სტანდარტის ნებისმიერი ფორმით გავრცელება სააგენტოს ნებართვის გარეშე აკრძალულია

English Version

Building materials and products - Hygrothermal properties -
Tabulated design values and procedures for determining
declared and design thermal values (ISO 10456:2007)

Matériaux et produits pour le bâtiment - Propriétés
hygrothermiques - Valeurs utiles tabulées et procédures
pour la détermination des valeurs thermiques déclarées et
utiles (ISO 10456:2007)

Baustoffe und Bauprodukte - Wärme- und
feuchtetechnische Eigenschaften - Tabellierte
Bemessungswerte und Verfahren zur Bestimmung der
wärmeschutztechnischen Nenn- und Bemessungswerte
(ISO 10456:2007)

This European Standard was approved by CEN on 7 December 2007.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....3

საინფორმაციო ნაწილი. სრული ტექსტის სახასიათოდ შეიძინეთ სტანდარტი.

Foreword

This document (EN ISO 10456:2007) 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 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 2008, and conflicting national standards shall be withdrawn at the latest by June 2008.

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 10456:1999.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 10456:2007 has been approved by CEN as a EN ISO 10456:2007 without any modification.

**Building materials and products —
Hygrothermal properties — Tabulated
design values and procedures for
determining declared and design thermal
values**

*Matériaux et produits pour le bâtiment — Propriétés hygrothermiques —
Valeurs utiles tabulées et procédures pour la détermination des valeurs
thermiques déclarées et utiles*

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2007

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms, definitions, symbols and units	1
3.1 Terms and definitions.....	1
3.2 Symbols and units	2
4 Test methods and test conditions	3
4.1 Tests for thermal properties	3
4.2 Tests for moisture properties	3
5 Determination of declared thermal values	3
6 Determination of design thermal values	4
6.1 General.....	4
6.2 Rounding of design values	4
6.3 Design values derived from declared values.....	5
6.4 Design values derived from measured values	5
7 Conversion of thermal values	5
7.1 General.....	5
7.2 Conversion for temperature	5
7.3 Conversion for moisture	6
7.4 Age conversion	6
7.5 Natural convection.....	6
8 Tabulated design hygrothermal values	8
8.1 General.....	8
8.2 Design thermal values.....	8
8.3 Design moisture values	8
Annex A (normative) Conversion coefficients for temperature	15
Annex B (informative) Examples of calculations	19
Annex C (informative) Statistical calculations	22
Bibliography	24

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 10456 was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 2, *Calculation methods*.

This third edition cancels and replaces the second edition (ISO 10456:1999), which has been technically revised.

The following changes have been made to the second edition:

- the Scope has been extended to include tabulated design values of thermal and moisture properties of materials, and the title has been modified accordingly;
- an Introduction has been added;
- the Scope specifies that moisture coefficients are valid only between 0 °C and 30 °C;
- 4.2 has been added as a new subclause on tests for moisture properties;
- 7.2 has been extended to contain general information about climates;
- 7.4 contains clarification that ageing factors are not applied if taken into account in declared values;
- 7.5 has been added as a new subclause dealing with convection in insulating materials;
- Clause 8 has been added, giving tabulated design values (in Tables 3, 4 and 5); the data, taken from EN 12524, have been reviewed and updated.
- Annex A contains data reviewed for extruded polystyrene (XPS) and polyurethane (PU).

საინფორმაციო ნაწილი. სრული ტექსტის სახსრავად შეიძინეთ სტანდარტი.

Introduction

This International Standard provides the means (in part) to assess the contribution that building products and services make to energy conservation and to the overall energy performance of buildings.

Heat and moisture transfer calculations require design values of thermal and moisture properties for materials used in building applications.

Design values can be derived from declared values that are based on measured data on the product concerned, which is usually the case for thermal insulation materials. Where the design conditions differ from those of the declared value, the data needs to be converted to the applicable conditions. This International Standard provides the methods and data for making this conversion.

For materials for which measured values are not available, design values can be obtained from tables. This International Standard provides such tabulated information based on the compilation of existing data (see reference documents listed in the Bibliography).