



**SLOVENSKI STANDARD**  
**SIST EN ISO 10456:2001**  
**01-september-2001**

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Building materials and products - Procedures for determining declared and design thermal values (ISO 10456:1999)

Baustoffe und -produkte - Verfahren zur Bestimmung der wärmeschutztechnischen Nenn- und Bemessungswerte (ISO 10456:1999)

**iTeh STANDARD PREVIEW**

Matériaux et produits du bâtiment - Procédures pour la détermination des valeurs thermiques déclarées et utiles (ISO 10456:1999)

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Ta slovenski standard je istoveten z: **EN ISO 10456:1999**

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**ICS:**

91.100.01

91.120.10

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**en**

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ICS 91.120.10

English version

Building materials and products - Procedures for determining  
declared and design thermal values (ISO 10456:1999)

Matériaux et produits du bâtiment - Procédures pour la  
détermination des valeurs thermiques déclarées et utiles  
(ISO 10456:1999)

Baustoffe und -produkte - Verfahren zur Bestimmung der  
wärmeschutztechnischen Nenn- und Bemessungswerte  
(ISO 10456:1999)

This European Standard was approved by CEN on 5 September 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

### **Foreword**

The text of the International Standard ISO 10456:1999 has been prepared by Technical Committee ISO/TC 163 "Thermal insulation" 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 2000, and conflicting national standards shall be withdrawn at the latest by June 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

### **Endorsement notice**

The text of the International Standard ISO 10456:1999 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**Annex ZA (normative)**  
**Normative references to international publications**  
**with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year	Title
ISO 8301	1991	Thermal insulation - Determination of steady-state thermal resistance and related properties - Heat flow meter apparatus	EN 12664		Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Dry and moist products of medium and low thermal resistance
ISO 8302	1991	Thermal insulation - Determination of steady-state thermal resistance and related properties - Guarded hot plate apparatus und -produkten	EN 12667		Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance
			EN 12939		Thermal performance of building materials and products - Determination of thermal resistance means of guarded hot plate and heat flow meter methods - Thick products of high and medium thermal resistance
ISO 8990	1994	Thermal insulation - Determination of steady-state thermal transmission properties - Calibrated and guarded hot box	EN ISO 8890	1996	Thermal insulation - Determination of steady-state thermal transmission properties - Calibrated and guarded hot box

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design thermal values**

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Printed in Switzerland



## 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 3.

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.

International Standard ISO 10456 was prepared by Technical Committee ISO/TC 163, *Thermal insulation*, Subcommittee SC 2, *Calculation methods*.

This second edition cancels and replaces the first edition (ISO 10456:1997), of which it constitutes a minor revision.

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# Building materials and products — Procedures for determining declared and design thermal values

## 1 Scope

This International Standard specifies methods for the determination of declared and design thermal values for thermally homogeneous building materials and products.

It also gives procedures to convert values obtained under one set of conditions to those valid for another set of conditions. These procedures are valid for design ambient temperatures between  $-30\text{ °C}$  and  $+60\text{ °C}$ .

Conversion coefficients for temperature, valid for mean temperatures between  $0\text{ °C}$  and  $30\text{ °C}$ , and moisture are given in annex A.

This International Standard does not give any conversion coefficients for the effect of ageing or other effects like convection or settlement.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8301:1991, *Thermal insulation — Determination of steady-state specific thermal resistance and related properties — Heat flow meter apparatus.*

ISO 8302:1991, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus.*

ISO 8990:1994, *Thermal insulation — Determination of steady-state thermal transmission properties — Calibrated and guarded hot box.*

## 3 Terms, definitions and symbols

### 3.1 Definitions

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

#### 3.1.1

##### **declared thermal value**

expected value of a thermal property of a building material or product

- assessed from measured data at reference conditions of temperature and humidity;
- given for a stated fraction and confidence level;
- corresponding to a reasonable expected service lifetime under normal conditions