



**SLOVENSKI STANDARD**  
**SIST EN ISO 14683:2008**

**01-junij-2008**

**BUXca Yý U**  
**SIST EN ISO 14683:2000**

---

**Toplotni mostovi v stavbah - Linearna toplotna prehodnost - Poenostavljena metoda in privzete vrednosti (ISO 14683:2007)**

Thermal bridges in building construction - Linear thermal transmittance - Simplified methods and default values (ISO 14683:2007)

Wärmebrücken im Hochbau - Längenbezogener Wärmedurchgangskoeffizient - Vereinfachte Verfahren und Anhaltswerte (ISO 14683:2007)

Ponts thermiques dans les bâtiments - Coefficient de transmission thermique linéique - Méthodes simplifiées et valeurs par défaut (ISO 14683:2007)

**Ta slovenski standard je istoveten z: EN ISO 14683:2007**

---

**ICS:**

91.120.10      Toplotna izolacija stavb      Thermal insulation

**SIST EN ISO 14683:2008**      **en,fr**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 14683:2008

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>

English Version

Thermal bridges in building construction - Linear thermal  
transmittance - Simplified methods and default values (ISO  
14683:2007)

Ponts thermiques dans les bâtiments - Coefficient linéique  
de transmission thermique - Méthodes simplifiées et  
valeurs par défaut (ISO 14683:2007)

Wärmebrücken im Hochbau - Längenbezogener  
Wärmedurchgangskoeffizient - Vereinfachte Verfahren und  
Anhaltswerte (ISO 14683:2007)

This European Standard was approved by CEN on 7 November 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.

<https://standards.iteh.ai/catalog/standards/sist/71d0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>



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

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

SIST EN ISO 14683:2008

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>

## Foreword

This document (EN ISO 14683:2007) 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 14683:1999.

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.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

Endorsement notice

The text of ISO 14683:2007 has been approved by CEN as a EN ISO 14683:2007 without any modification.

[SIST EN ISO 14683:2008](https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008)

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 14683:2008

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>

---

---

**Thermal bridges in building  
construction — Linear thermal  
transmittance — Simplified methods and  
default values**

*Ponts thermiques dans les bâtiments — Coefficient linéique de  
transmission thermique — Méthodes simplifiées et valeurs par défaut*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 14683:2008](https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008)

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>



**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.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 14683:2008](https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008)

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>



**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](mailto:copyright@iso.org)  
Web [www.iso.org](http://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
3.3 Subscripts .....	2
4 Influence of thermal bridges on overall heat transfer.....	3
4.1 Transmission heat transfer coefficient .....	3
4.2 Linear thermal transmittance .....	3
4.3 Internal and external dimensions.....	4
5 Determination of linear thermal transmittance.....	4
5.1 Available methods and expected accuracy .....	4
5.2 Numerical calculations.....	4
5.3 Thermal bridge catalogues.....	4
5.4 Manual calculation methods.....	5
5.5 Default values of linear thermal transmittance.....	5
Annex A (informative) Default values of linear thermal transmittance.....	6
Annex B (informative) Example of the use of default values of linear thermal transmittance in calculating the heat transfer coefficient.....	19
Bibliography .....	23

## 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 14683 was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 2, *Calculation methods*.

This second edition cancels and replaces the first edition (ISO 14683:1999), which has been technically revised.

The following principal changes have been made to the first edition:

- the Scope has been amended to remove the restriction on window and door frames and curtain walling, and specifies that the default values of linear thermal transmittance are provided for information;
- 5.2 is a new subclause replacing some elements previously contained in 4.2;
- 5.5 is a summary into a short text of the former 5.4, the remainder of which has been transferred into informative Annex A;
- Annex A contains values of linear thermal transmittance which have all been reviewed, many of them amended upwards as a result of changing the basis in Table A.1 (intermediate floor slabs thickness of 200 mm instead of 150 mm; frames in openings of thickness 60 mm instead of 100 mm).

## 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.

Thermal bridges in building constructions give rise to changes in heat flow rates and surface temperatures compared with those of the unbridged structure. These heat flow rates and temperatures can be precisely determined by numerical calculation in accordance with ISO 10211. However, for linear thermal bridges, it is often convenient to use simplified methods or tabulated values to obtain an estimate of their linear thermal transmittance.

The effect of repeating thermal bridges which are part of an otherwise uniform building element, such as wall ties penetrating a thermal insulation layer or mortar joints in lightweight blockwork, needs to be included in the calculation of the thermal transmittance of the building element concerned, in accordance with ISO 6946.

Although not covered by this International Standard, it is worth noting that thermal bridges can also give rise to low internal surface temperatures, with an associated risk of surface condensation or mould growth.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 14683:2008](https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008)

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 14683:2008

<https://standards.iteh.ai/catalog/standards/sist/7fd0a5c5-a788-426b-b308-5ae35dad9d3c/sist-en-iso-14683-2008>