

Thermal performance of building products and components - Specific criteria for the assessment of laboratories measuring heat transfer properties - Part 1: Common criteria

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1946-1:2001 sisaldab Euroopa standardi EN 1946-1:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1946-1:2001 consists of the English text of the European standard EN 1946-1:1999.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard gives specific technical criteria to be used within the frame of the general criteria given in EN 45001 and EN 45002 for the assessment of laboratories performing heat transfer property measurements of building products and components according to standardized test methods. It is relevant both to assessments conducted internally and to those carried out formally by an accreditation body, and is intended to be of assistance to all interested parties.</p>	<p>Scope:</p> <p>This standard gives specific technical criteria to be used within the frame of the general criteria given in EN 45001 and EN 45002 for the assessment of laboratories performing heat transfer property measurements of building products and components according to standardized test methods. It is relevant both to assessments conducted internally and to those carried out formally by an accreditation body, and is intended to be of assistance to all interested parties.</p>
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Võtmesõnad: building products, documentation, heat transfer, laboratory assessment, testing, thermal properties

English version

Thermal performance of building products and components
**Specific criteria for the assessment of laboratories
measuring heat transfer properties**

Part 1: Common criteria

Performance thermique des produits et
composants pour le bâtiment –
Critères particuliers pour l'évaluation
des laboratoires mesurant les
propriétés de transmission thermique –
Partie 1: Critères communs

Wärmetechnisches Verhalten von
Bauprodukten und Bauteilen –
Technische Kriterien zur Begut-
achtung von Laboratorien bei der
Durchführung der Messungen von
Wärmeübertragungseigenschaften –
Teil 1: Allgemeingültige Regeln

This European Standard was approved by CEN on 1998-12-13.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

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Foreword

This European Standard has been prepared by 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 July 1999, and conflicting national standards shall be withdrawn at the latest by July 1999.

This European Standard is divided into parts. The first part covers common criteria applicable to all heat transfer property measurements; each subsequent part covers the specific technical criteria applicable to each heat transfer property measurement method described in appropriate standards.

The following parts have been developed:

- Part 1: Common criteria
- Part 2: Measurements by guarded hot plate method
- Part 3: Measurements by heat flow meter method
- Part 4: Measurements by hot box methods
- Part 5: Measurements by pipe test methods

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.

Introduction

In the field of heat transfer property testing, many pieces of test equipment have been constructed by the laboratories themselves and they often differ significantly in their detailed design, so that each equipment is assessed as for a prototype.

This makes the assessment of the equipment accuracy a very complex matter, requiring in-depth knowledge and understanding of the equipment and test procedures employed and of the factors that can influence the accuracy of the results. Because of the complexity of standardized procedures for the assessment of equipment accuracy, they have been separated from standards on equipment description and testing procedures to be used by the operator in every day testing practice.

There is therefore a need for a link between the accreditation standards of the EN 45000 series and each relevant standard test method, by providing standardized assessment procedures specifically suitable to heat transfer property measurements.

While the majority of this standard is devoted to fixing standardized procedures for the assessment of equipment accuracy, the adoption of these procedures in laboratory assessment according to EN 45000 series standards defines by itself the required level of competence of the laboratory personnel.

1 Scope

This standard gives specific technical criteria to be used within the frame of the general criteria given in EN 45001 and EN 45002 for the assessment of laboratories performing heat transfer property measurements of building products and components according to standardized test methods. It is relevant both to assessments conducted internally and to those carried out formally by an accreditation body, and is intended to be of assistance to all interested parties.

It gives contents of the documentation required by EN 45001 (equipment manual, calibration and maintenance files, measurement procedure document) and the procedures for the assessment of equipment accuracy and performance check. All other requirements regarding laboratories undertaking heat transfer property measurements are given in the EN 45000 series.

This part 1 of this standard gives assessment requirements common to various test methods; the subsequent parts give assessment requirements which are relevant to each test method. The application of this standard assumes an adequate level of competence for the personnel involved.

2 Normative references

This 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 standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred applies.

EN 45001	General criteria for the operation of testing laboratories
EN 45002	General criteria for the assessment of testing laboratories
EN 45020	General terms and their definitions concerning standardization and related activities.

3 Definitions

For the purposes of this standard, the definitions of "test", "test method" and "(laboratory) proficiency testing" given in EN 45020 and the following definitions apply.

- 3.1 heat transfer property measurement:** Determination of a heat transfer property according to a standardized test method.
- 3.2 equipment manual:** Document containing information on performance, specifications, descriptions, design, error analysis and initial performance check for equipment.
- 3.3 measurement procedure document:** Document containing information on specimen handling and preparation, testing procedures, test reporting, scheduled equipment checks and maintenance.