SLOVENSKI STANDARD
SIST EN ISO 22007-2:2012

01-marec-2012

Polimerni materiali - Ugotavljanje toplotne prevodnosti in toplotne razprševalnosti - 2. del: Metoda s tranzientnim ploskovnim toplotnim virom (vroči disk) (ISO 22007-2:2008)

Plastics - Determination of thermal conductivity and thermal diffusivity - Part 2: Transient plane heat source (hot disc) method (ISO 22007-2:2008)

Kunststoffe - Bestimmung der Wärmeleitfähigkeit und der Temperaturleitfähigkeit - Teil 2: Transientes Flächenquellenverfahren (Hot-Disk-Verfahren) (ISO 22007-2:2008)

Plastiques - Détermination de la conductivité thermique et de la diffusivité thermique - Partie 2: Méthode de la source plane transitoire (disque chaud) (ISO 22007-2:2008)

Ta slovenski standard je istoveten z: **EN ISO 22007-2:2012**

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general

SIST EN ISO 22007-2:2012 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 22007-2

January 2012

ICS 83.080.01

English Version

Plastics - Determination of thermal conductivity and thermal diffusivity - Part 2: Transient plane heat source (hot disc) method (ISO 22007-2:2008)

Plastiques - Détermination de la conductivité thermique et de la diffusivité thermique - Partie 2: Méthode de la source plane transitoire (disque chaud) (ISO 22007-2:2008)

Kunststoffe - Bestimmung der Wärmeleitfähigkeit und der Temperaturleitfähigkeit - Teil 2: Transientes Flächenquellenverfahren (Hot-Disk-Verfahren) (ISO 22007-2:2008)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 22007-2:2008 has been prepared by Technical Committee ISO/TC 61 “Plastics” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 22007-2:2012 by Technical Committee CEN/TC 249 “Plastics” the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by July 2012, and conflicting national standards shall be withdrawn at the latest by July 2012.

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Endorsement notice

The text of ISO 22007-2:2008 has been approved by CEN as a EN ISO 22007-2:2012 without any modification.

INTERNATIONAL STANDARD

ISO 22007-2

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2008-12-15

Corrected version
2009-02-15

Plastics — Determination of thermal conductivity and thermal diffusivity —

Part 2: Transient plane heat source (hot disc) method

Plastiques — Détermination de la conductivité thermique et de la diffusivité thermique —
Partie 2: Méthode de la source plane transitoire (disque chaud)

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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.

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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.

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ISO 22007-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

ISO 22007 consists of the following parts, under the general title *Plastics — Determination of thermal conductivity and thermal diffusivity*:

— *Part 1: General principles*

— *Part 2: Transient plane heat source (hot disc) method*

— *Part 3: Temperature wave analysis method*

— *Part 4: Laser flash method*

In this corrected version of ISO 22007-2:2008, Figure 3 has been amended to remove a horizontal line running between ΔU and the earth connection.

Introduction

A significant increase in the development and application of new and improved materials for broad ranges of physical, chemical, biological and medical applications has necessitated better performance data from methods of measurement of thermal-transport properties. The introduction of alternative methods that are relatively simple, fast and of good precision would be of great benefit to the scientific and engineering communities [1].

A number of measurement techniques described as contact transient methods have been developed and several have been commercialized. These are being widely used and are suitable for testing many types of material. In some cases, they can be used to measure several properties separately or simultaneously [2],[3].

A further advantage of some of these methods is that it has become possible to measure the true bulk properties of a material. This feature stems from the possibility of eliminating the influence of the thermal contact resistance (see 8.1.1) that is present at the interface between the probe and the specimen surfaces [1],[3],[4],[5],[6].