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**Polimerni materiali - Ugotavljanje toplotne prevodnosti in toplotne razprševalnosti  
- 3. del: Metoda analize s toplotnim valom (ISO 22007-3:2008)**

Plastics - Determination of thermal conductivity and thermal diffusivity - Part 3:  
Temperature wave analysis method (ISO 22007-3:2008)

Kunststoffe - Bestimmung der Wärmeleitfähigkeit und der Temperaturleitfähigkeit - Teil 3:  
Temperaturwellen-Analysenverfahren (ISO 22007-3:2008)

Plastiques - Détermination de la conductivité thermique et de la diffusivité thermique -  
Partie 3: Méthode par analyse de l'oscillation de la température (ISO 22007-3:2008)

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**ICS:**

83.080.01	Polimerni materiali na splošno	Plastics in general
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**Plastics - Determination of thermal conductivity and thermal diffusivity - Part 3: Temperature wave analysis method (ISO 22007-3:2008)**

Plastiques - Détermination de la conductivité thermique et de la diffusivité thermique - Partie 3: Méthode par analyse de l'oscillation de la température (ISO 22007-3:2008)

Kunststoffe - Bestimmung der Wärmeleitfähigkeit und der Temperaturleitfähigkeit - Teil 3: Temperaturwellen-Analysenverfahren (ISO 22007-3:2008)

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## Foreword

The text of ISO 22007-3:2008 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 22007-3:2012 by Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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**Plastics — Determination of thermal  
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Part 3:  
Temperature wave analysis method**

*Plastiques — Détermination de la conductivité thermique et de la  
diffusivité thermique —*

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*Partie 3: Méthode par analyse de l'oscillation de la température*

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## ISO 22007-3:2008(E)

## 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.

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ISO 22007-3 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*

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## Introduction

Thermal-transport properties of plastics are indispensable not only in the plastics industry but also in other fields. Plastics are used in various manufacturing processes in new application areas, such as nanotechnologies, and in the biomedical industry. Accurate but simple small-scale measurements are required which can be performed quickly.

High sensitivity and excellent temperature resolution are peculiar to the modulation techniques used for the measurement of thermal-transport properties. Temperature wave analysis is a method of measuring the thermal diffusivity of thin specimens and is also suitable for use with small specimens.

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