



**SLOVENSKI STANDARD**  
**SIST EN ISO 8987:1999**

01-maj-1999

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Plastics - Phenolic resins - Determination of reactivity on a B-transformation test plate  
(ISO 8987:1995)

Kunststoffe - Phenolharze - Bestimmung der Reaktivität auf einer B-Zeit-Prüfplatte (ISO  
8987:1995)

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Plastiques - Résines phénoliques - Méthode d'évaluation de la réactivité sur plaque  
d'essai de transformation au stade B (ISO 8987:1995)

<https://standards.iteh.ai/catalog/standards/sist/afddca19-7036-41ce-b7e7-3035aa484142/sist-en-iso-8987-1999>

**Ta slovenski standard je istoveten z: EN ISO 8987:1998**

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**ICS:**

83.080.10      Duromeri      Thermosetting materials

**SIST EN ISO 8987:1999**      en

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 8987

August 1998

ICS 83.080.10

Supersedes EN ISO 8987:1995

Descriptors: see ISO document

English version

Plastics - Phenolic resins - Determination of reactivity on a B-  
transformation test plate (ISO 8987:1995)

Plastiques - Résines phénoliques - Méthode d'évaluation  
de la réactivité sur plaque d'essai de transformation au  
stade B (ISO 8987:1995)

Kunststoffe - Phenolharze - Bestimmung der Reaktivität auf  
einer B-Zeit-Prüfplatte (ISO 8987:1995)

This European Standard was approved by CEN on 12 June 1998.

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.

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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

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## Foreword

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This European Standard replaces EN ISO 8987:1995.

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 February 1999, and conflicting national standards shall be withdrawn at the latest by February 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, 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 8987:1995 has been approved by CEN as a European Standard without any modification.

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# INTERNATIONAL STANDARD

**ISO**  
**8987**

Second edition  
1995-12-15

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## Plastics — Phenolic resins — Determination of reactivity on a B-transformation test plate

**iTeh STANDARD PREVIEW**

**(standards.iteh.ai)**

*Plastiques — Résines phénoliques — Méthode d'évaluation de la réactivité  
sur plaque d'essai de transformation au stade B*

SIST EN ISO 8987:1999

<https://standards.iteh.ai/catalog/standards/sist/af1dca19-7036-41cc-b7e7-3035aa484142/sist-en-iso-8987-1999>



Reference number  
ISO 8987:1995(E)

**ISO 8987:1995(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.

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 8987 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This second edition cancels and replaces the first edition (ISO 8987:1988) which has been revised so that, in both method A and method B, the test plate may be fitted with an integral heater.

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International Organization for Standardization

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# Plastics — Phenolic resins — Determination of reactivity on a B-transformation test plate

## 1 Scope

This International Standard specifies methods for the determination of the B-transformation time of phenolic resins at a specified temperature and under specified conditions on a heated test plate.

Two methods are described, each with a different test plate:

Method A — plate with depressions in the form of segments of spheres;

Method B — flat plate without depressions.

**3.1.3 Glass rod**, 5 mm in diameter, tapering to about 2 mm in diameter at one end.

**3.1.4 Balance**, scale interval 0,01 g.

**3.1.5 Syringe**.

**3.1.6 Stopwatch**, with at least 1 s sub-divisions.

**3.1.7 B-transformation test plate**, with depressions as shown in figure 1, with or without an integral heater.

## 2 Principle

The condensation of the phenolic resin is carried out to the B-stage on one of two types of test plate, depending on the method.

## 3 Method A: Determination on a plate with depressions

### 3.1 Apparatus

**3.1.1 Thermostatic control device**, permissible temperature variation  $\pm 0,5$  °C.

**3.1.2 Hotplate**, on which the test plate can be arranged in a suitable manner to obtain optimum heat transfer.

NOTE 1 No hotplate is necessary if a test plate with an integral heater is used.

### 3.2 Number of tests

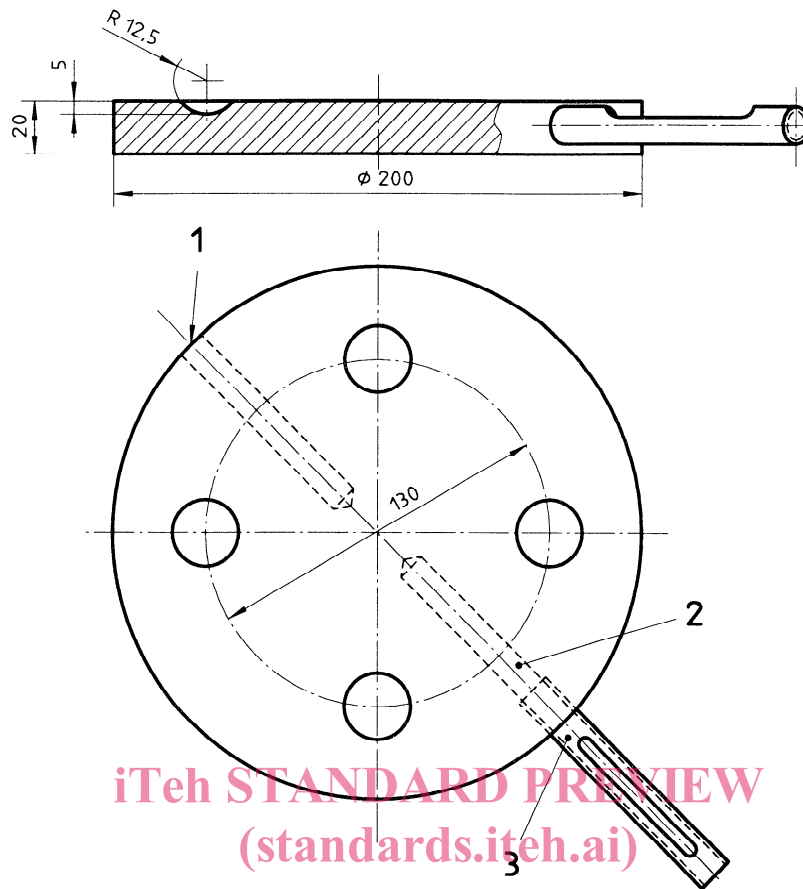
Conduct one or more tests, depending on the requirements of the appropriate International Standard or as agreed between the parties concerned.

### 3.3 Procedure

Bring the B-transformation test plate (3.1.7) to the required temperature and place a box, open on one side, round the test plate to provide protection against draughts. Pour  $0,5 \text{ g} \pm 0,05 \text{ g}$  of phenolic resin into one of the depressions in the test plate and start the stopwatch (3.1.6) when the resin touches the plate. Liquid resins or phenolic resin solutions may be placed in the depression with a syringe (3.1.5). Stir the resin with the glass rod (3.1.3), using short circular movements from the edge of the depression towards the middle.

For longer B-transformation times, stir initially for one minute and then at one-minute intervals for 10 s in each case. If the B-transformation point is reached within a one-minute interval, repeat the test, knowing the approximate test time.

Dimensions in millimetres



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#### Key

- 1 Hole for temperature sensor of thermostatic control device  
 2 Hole for thermometer stem  
 3 Protective metal tube for thermometer

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Figure 1 — B-transformation test plate

Towards the end of the test, when the resin becomes viscous, stir continuously. Briefly lift the rod to determine whether the resin will still form fibres. The B-transformation point is reached when resin fibres are no longer formed when the rod is briefly lifted, but instead the resin breaks away in a rubbery mass. When the resin reaches this state, stop the stopwatch. Report the measured time in minutes and seconds.

## 4 Method B: Determination on a flat plate without depressions

### 4.1 Apparatus

**4.1.1 Thermostatic control device**, permissible temperature variation  $\pm 0,5$  °C.

**4.1.2 Hotplate**, on which the test plate can be arranged in a suitable manner to obtain optimum heat transfer.

NOTE 2 No hotplate is necessary if a test plate with an integral heater is used.

**4.1.3 Spatula**, about 10 cm long and 1,25 cm wide.

**4.1.4 Balance**, scale interval 0,01 g.

**4.1.5 Syringe**.

**4.1.6 Stopwatch**, with at least 1 s sub-divisions.

**4.1.7 B-transformation test plate**, measuring approximately 15 cm  $\times$  15 cm, with a hard, chromium-plated surface and fitted with a thermometer in a thermometer well, with or without an integral heater.