SLOVENSKI STANDARD
SIST EN ISO 8619:1999

01-maj-1999

Polimerni materiali ï Praġkaste fenolne smole ï Doloḍ evanje pretoḍ ne razdalje na segreti stekleni ploġḍ i (ISO 8619:1995)

Plastics - Phenolic resin powder - Determination of flow distance on a heated glass plate (ISO 8619:1995)

Kunststoffe - Pulverförmige Phenolharze - Bestimmung der Fließstrecke auf einer vorgeheizten Glasplatte (ISO 8619:1995)

Plastiques - Résines phénoliques en poudre - Détermination de l'écoulement a l'état fondu sur une plaque de verre chauffée (ISO 8619:1995)

Ta slovenski standard je istoveten z: **EN ISO 8619:1998**

ICS:

83.080.10	Duromeri	Thermosetting materials

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EUROPEAN STANDARD

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EN ISO 8619

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Descriptors: see ISO document

Supersedes EN ISO 8619:1995

English version

Plastics - Phenolic resin powder - Determination of flow distance on a heated glass plate (ISO 8619:1995)

Plastiques - Résines phénoliques en poudre - Détermination de l'écoulement à l'état fondu sur une plaque de verre chauffée (ISO 8619:1995)

Kunststoffe - Pulverförmige Phenolharze - Bestimmung der Fließstrecke auf einer vorgeheizten Glasplatte (ISO 8619:1995)

This European Standard was approved by CEN on 24 May 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.

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.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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 8619:1995.

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 December 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.

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 8619:1995 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO 8619

Second edition
1995-12-15

Plastics — Phenolic resin powder — Determination of flow distance on a heated glass plate

Plastiques — Résines phénoliques en poudre — Détermination de l'écoulement à l'état fondu sur une plaque de verre chauffée

Reference number
ISO 8619:1995(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 8619 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This second edition cancels and replaces the first edition (ISO 8619:1988) in which the alternative use of an unheated glass plate has been deleted and precision data added.

International Organization for Standardization
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Plastics — Phenolic resin powder — Determination of flow distance on a heated glass plate

1 Scope

1.1 This International Standard specifies a method for the determination of the flow distance of powdered heat-setting phenolic resins for production and control. With reference to tablet formation, test temperature and angle of inclination of the glass plate, measurement of the flow distance involves arbitrarily defined conditions.

1.2 The flow distance is dependent on the reactivity and melt viscosity of the resins. Rapid solidification and high melt viscosity shorten the flow distance.

2 Principle

Tablets are first produced under defined conditions and are placed on a glass plate which has been heated to 125 °C ± 1 °C in a naturally ventilated oven. The plate is kept in the oven for a further 3 min in the horizontal position and then for 20 min in a tilted position. The flow distance is then measured.

3 Apparatus

3.1 Oven with natural ventilation, capable of being maintained at a temperature of 125 °C ± 1 °C. A spirit level is used to check its horizontal position. The temperature is measured in the immediate vicinity of the test tablets.

3.2 Cylindrical tablet press, for producing tablets 12,5 mm ± 0,3 mm in diameter and 4,8 mm ± 0,2 mm thick.

3.3 Balance, accurate to 1 mg.

3.4 Tilting device, made of metal, which can be manipulated from outside the oven to position the glass plate (3.5) either horizontally or at an angle of 60° ± 1° (see figure 1).

3.5 Glass plate, of a suitable size to fit in the oven, for example length 100 mm to 150 mm, width 60 mm to 120 mm, thickness 2,7 mm to 3 mm. The glass plate shall be absolutely clean, smooth and without scratches. To make sure that the tablets have not become displaced during the experiment, a starting line may be drawn on the plate.

NOTE 1 The starting line is scored on the plate using a glass cutter. It has no influence on the result, and is simply used for precise positioning of the tablets and for measuring the flow distance.

4 Procedure

4.1 In case of dispute, dry the sample until constant mass is obtained, for example by storing the powdered resin in a desiccator for at least 48 h over phosphorus pentoxide.

NOTE 2 The water content of the sample has a marked influence on the flow distance.

4.2 Weigh, to the nearest 1 mg, 0,500 g of the powdered resin, and pour into the tablet press (3.2) [see figure 2a)]. Close the press and compress the powder [see figure 2b)] either using a rubber hammer or a lever handle. Eject the tablet from the mould by removing parts 3 and 4 [see figure 2b)] and by pushing the shaft of part 2 into part 1 [see figure 2c)]. Make two tablets in this way.

NOTE 3 With resin powders having a high apparent density (those containing inorganic additives, for example), more than 0,500 g of powder may be taken in order to produce a tablet with the required thickness (4,8 mm ± 0,2 mm).

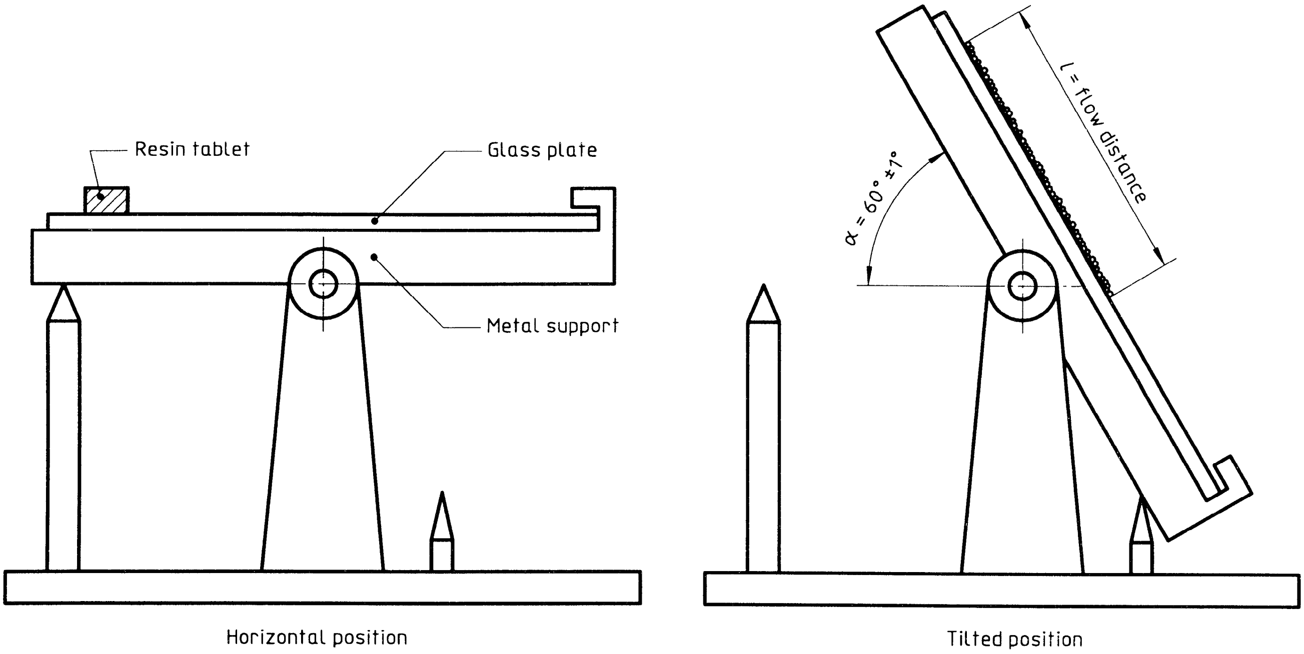

Figure 1 — Example of tilting device

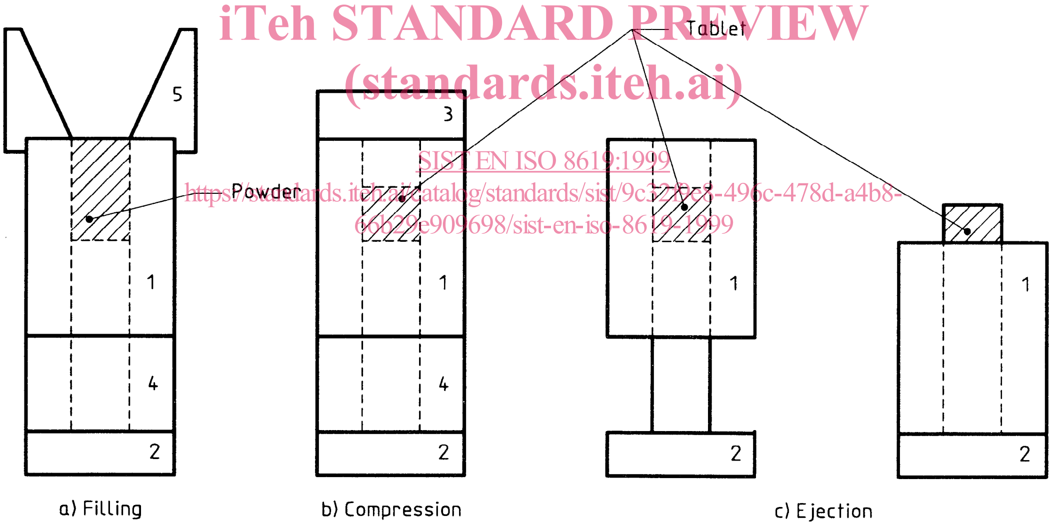

Figure 2 — Diagrammatic representation of tablet production

4.3 Lay the glass plate (3.5) on the tilting device (3.4) in the horizontal position in the oven (3.1), maintained at a temperature of 125 °C ± 1 °C, and heat for at least 60 min. Open the door of the oven and, within 5 s and without removing the plate from the oven, lay the two tablets (see 4.2) flat on the glass, at least 1 cm apart and at least 1 cm away from the side edges and what will be the upper edge when the plate is tilted.

Keep the glass plate with the tablets on it for 3 min ± 3 s in the horizontal position. Then tilt the device quickly but without jolting the plate, within a maximum of 5 s, to an angle of 60° ± 1° (see figure 1).

4.4 After 20 min in the inclined position, remove the glass plate from the oven and allow it to cool. Then measure for each tablet the flow distance, including tablet diameter, to the nearest 1 mm.

Should a tablet slip after the plate has been tilted to 60°, measure the distance from the point where it started to flow, including tablet diameter.