

SLOVENSKI STANDARD
SIST EN ISO 10724-1:2002**01-februar-2002**

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Plastics - Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs) - Part 1: General principles and moulding of multipurpose test specimens (ISO 10724-1:1998)

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Kunststoffe - Spritzgießen von Probekörpern aus duroplastischen rieselfähigen Formmassen (PMC) - Teil 1: Allgemeine Grundlagen und Herstellung von Vielzweckprobekörpern (ISO 10724-1:1998)

[SIST EN ISO 10724-1:2002](https://standards.itih.ai/catalog/standards/sist/9a432fc0-25fb-4840-b851-10724-1:2002)

Plastiques - Moulage par injection d'éprouvettes en compositions de poudre a mouler (PMC) thermodurcissables - Partie 1: Principes généraux et moulage d'éprouvettes a usages multiples (ISO 10724-1:1998)

Ta slovenski standard je istoveten z: EN ISO 10724-1:2001

ICS:

83.080.10 Duromeri Thermosetting materials

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 10724-1

August 2001

ICS 83.080.10

English version

Plastics - Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs) - Part 1: General principles and moulding of multipurpose test specimens (ISO 10724-1:1998)

Plastiques - Moulage par injection d'éprouvettes en compositions de poudre à mouler (PMC) thermodurcissables - Partie 1: Principes généraux et moulage d'éprouvettes à usages multiples (ISO 10724-1:1998)

Kunststoffe - Spritzgießen von Probekörpern aus duroplastischen rieselfähigen Formmassen (PMC) - Teil 1: Allgemeine Grundlagen und Herstellung von Vielzweckprobekörpern (ISO 10724-1:1998)

This European Standard was approved by CEN on 11 June 2001.

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 Management Centre 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 Management Centre 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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 10724-1:2001 (E)

CORRECTED 2002-02-06

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 a European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 2002, and conflicting national standards shall be withdrawn at the latest by February 2002.

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 10724-1:1998 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

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Annex ZA (normative)

Normative references to international publications with their relevant European publications

This European 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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 294-1	1996	Plastics — Injection moulding of test specimens of thermoplastic materials — Part 1: General principles and moulding of multipurpose and bar test specimens	EN ISO 294-1	1998
ISO 294-2	1996	Plastics — Injection moulding of test specimens of thermoplastic materials — Part 2: Small tensile bars	EN ISO 294-2	1998
ISO 294-3	1998	Plastics — Injection moulding of test specimens of thermoplastic materials — Part 3: Small plates	EN ISO 294-3	1998
ISO 3167	1993	Plastics — Multipurpose-test specimens	EN ISO 3167	1996
ISO 11403-1	1994	Plastics — Acquisition and presentation of comparable multipoint data — Part 1: Mechanical properties	EN ISO 11403-1	1999
ISO 11403-2	1995	Plastics — Acquisition and presentation of comparable multipoint data — Part 2: Thermal and processing properties	EN ISO 11403-2	1999
ISO 472	1999	Plastics – Vocabulary	EN ISO 472	2001
ISO 10350-1	1998	Plastics - Acquisition and presentation of comparable single-point data - Part 1: Moulding materials	EN ISO 10350-1	2000
ISO 10724-2	1998	Plastics - Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs) - Part 2: Small plates	EN ISO 10724-2	2000
ISO 11403-3	1999	Plastics - Acquisition and presentation of comparable multipoint data - Part 3: Environmental influences on properties	EN ISO 11403-3	2001

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INTERNATIONAL STANDARD

ISO 10724-1

First edition
1998-11-15

Plastics — Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs) —

Part 1:

General principles and moulding of multipurpose test specimens

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Plastiques — Moulage par injection d'éprouvettes en compositions de poudre à mouler (PMC) thermodurcissables —

Partie 1: Principes généraux et moulage d'éprouvettes à usages multiples

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Reference number
ISO 10724-1:1998(E)

ISO 10724-1:1998(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 10724-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

Together with part 2, this part of ISO 10724 cancels and replaces ISO 10724:1994, which has been revised to improve the definition of the injection-moulding parameters and has been restructured to specify two types of ISO mould for the production of the basic specimen types required for the acquisition of comparable test data.

Care has been taken to ensure that the ISO moulds described can all be fitted in existing injection-moulding equipment and have interchangeable cavity plates.

As far as possible, the wording of this part of ISO 10724 and its definitions corresponds to that in its counterpart for thermoplastic materials, ISO 294:1996, *Plastics — Injection moulding of test specimens of thermoplastics materials*. Unlike the latter, however, there is no need for the separate moulding of rectangular bars (80 mm × 10 mm × 4 mm, which should be taken from the central portion of the multipurpose test specimen) or for the moulding of small tensile bars (≥ 60 mm × 10 mm × 3 mm). Therefore the type B and type C ISO moulds specified in ISO 294 have not been included in this part of ISO 10724. Regardless of this, and to avoid confusion, the designation of the different mould types in this part of ISO 10724 and in ISO 294 correspond to each other.

ISO 10724 consists of the following parts, under the general title *Plastics — Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs)*:

- *Part 1: General principles and moulding of multipurpose test specimens*
- *Part 2: Small plates*

Annexes A to D of this part of ISO 10724 are for information only.

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Introduction

Many factors in the injection-moulding process which can influence the properties of moulded test specimens and hence the measured values obtained when the specimens are used in a test method. The thermal and mechanical properties of such specimens are in fact strongly dependent on the conditions of the moulding process used to prepare the specimens. Exact definition of each of the main parameters of the moulding process is a basic requirement for reproducible and comparable operating conditions.

It is important in defining moulding conditions to consider any influence the conditions may have on the properties to be determined. Thermosets may show differences in orientation and length of anisotropic fillers such as short fibres and in curing. Residual ("frozen-in") stresses in the moulded test specimens may also influence properties. Due to the crosslinking of thermosets, molecular orientation is of less influence on mechanical properties than it is for thermoplastics. Each of these phenomena must be controlled to avoid fluctuation of the numerical values of the measured properties.

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Plastics — Injection moulding of test specimens of thermosetting powder moulding compounds (PMCs) —

Part 1:

General principles and moulding of multipurpose test specimens

1 Scope

This part of ISO 10724 specifies the general principles to be followed when injection moulding test specimens of thermosetting powder moulding compounds (PMCs) and gives details of mould designs for preparing one type of specimen for use in establishing reproducible moulding conditions. Its purpose is to promote uniformity in describing the main parameters of the moulding process and also to establish uniform practice in reporting moulding conditions. The particular conditions required for the reproducible preparation of test specimens which will give comparable results will vary for each material used. These conditions are given in the International Standard for the relevant material or are to be agreed upon between interested parties.

NOTE ISO round-robin tests with phenolic (PF), urea-formaldehyde (UF), melamine (MF), melamine phenolic (MP) and unsaturated-polyester (UP) injection-moulding materials have shown that mould design is an important factor in the reproducible preparation of test specimens.

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2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10724. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10724 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 294-1:1996, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 1: General principles, and moulding of multipurpose and bar test specimens.*

ISO 294-2:1996, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 2: Small tensile bars.*

ISO 294-3:1996, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 3: Small plates.*

ISO 472:—¹⁾, *Plastics — Vocabulary.*

ISO 2577:1984, *Plastics — Thermosetting moulding materials — Determination of shrinkage.*

ISO 3167:1993, *Plastics — Multipurpose test specimens.*

ISO 10350-1:1998, *Plastics — Acquisition and presentation of comparable single-point data — Part 1: Moulding materials.*

1) To be published. (Revision of ISO 472:1988)