



SLOVENSKI STANDARD
SIST EN ISO 580:2005

01-julij-2005

BUXca Yý U
SIST EN 763:1997

Cevni sistemi iz polimernih materialov - Brizgani plastomerni fittingi - Metode za vizualno oceno vpliva segrevanja (ISO 580:2005)

Plastics piping and ducting systems - Injection-moulded thermoplastics fittings - Methods for visually assessing the effects of heating (ISO 580:2005)

Kunststoff-Rohrleitungs- und Schutzrohrsysteme- Spritzguss-Formstücke aus Thermoplasten - Verfahren für die visuelle Beurteilung der Einflüsse durch Warmlagerung (ISO 580:2005) [SIST EN ISO 580:2005](https://standards.iteh.ai/catalog/standards/sist/bc0c1817-ff4e-4505-9476-68ec7eb83fcf/sist-en-iso-580-2005)

Systemes de canalisations et de gaines en plastiques - Raccords thermoplastiques moulés par injection - Méthodes d'essai pour estimer visuellement les effets de la chaleur (ISO 580:2005)

Ta slovenski standard je istoveten z: EN ISO 580:2005

ICS:

23.040.45	Fitingi iz polimernih materialov	Plastics fittings
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 580

February 2005

ICS 23.040.45

Supersedes EN 763:1994

English version

**Plastics piping and ducting systems - Injection-moulded
thermoplastics fittings - Methods for visually assessing the
effects of heating (ISO 580:2005)**

Systèmes de canalisations et de gaines en plastiques -
Raccords thermoplastiques moulés par injection -
Méthodes d'essai pour estimer visuellement les effets de la
chaleur (ISO 580:2005)

Kunststoff-Rohrleitungs- und Schutzrohrsysteme-
Spritzguss-Formstücke aus Thermoplasten - Verfahren für
die visuelle Beurteilung der Einflüsse durch Warmlagerung
(ISO 580:2005)

This European Standard was approved by CEN on 21 January 2005.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 580:2005 (E)**Foreword**

This document (EN ISO 580:2005) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document supersedes EN 763:1994.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 580:2005 has been approved by CEN as EN ISO 580:2005 without any modifications.

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INTERNATIONAL STANDARD

ISO 580

Third edition
2005-02-15

Plastics piping and ducting systems — Injection-moulded thermoplastics fittings — Methods for visually assessing the effects of heating

*Systèmes de canalisations et de gaines en plastiques — Raccords
thermoplastiques moulés par injection — Méthodes d'essai pour
estimer visuellement les effets de la chaleur*

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Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 580 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

This third edition cancels and replaces the second edition (ISO 580:1990), which has been technically revised.

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ISO 580:2005(E)**Introduction**

The test for determination of the resistance to heat according to the two test methods specified in this International Standard is applicable for distinguishing between properly and improperly moulded thermoplastics pipe fittings.

It can be used to

- determine whether cold slugs (pieces of material that enter the mould at a temperature significantly lower than the rest of the mass) or unfused areas are present,
- reveal cavities and porosity,
- determine the amount of moulded-in stress produced by the moulding process,
- reveal contamination, and
- show the integrity of the fusion line.

A stress-free part will generally have better properties and higher strength than parts with a higher degree of residual stress and will generally be less reactive when exposed to chemicals. By placing moulded fittings in a heated medium (air or liquid) at elevated temperature for a period of time dependant on their wall thickness, it is possible to detect internal stress.

Since the stresses start to be released as soon as the material passes to the rubbery state, it is only necessary to maintain the moulded pieces at a higher temperature for a defined period of time.

NOTE Injection-moulded fittings can be made by a number of techniques, whereby the material is injected into the mould cavity. These include single- or multi-point injection, diaphragm gating and ring gating. The technique used in the manufacture of mouldings will affect the way in which they are assessed.

Plastics piping and ducting systems — Injection-moulded thermoplastics fittings — Methods for visually assessing the effects of heating

1 Scope

This International Standard specifies two methods for assessing the effects of heating on injection-moulded thermoplastics pipe fittings — method A, using an air oven, and method B, using a liquid bath. In case of disagreement, method A is the reference method.

This International Standard is applicable to cement-welded fittings as well as to flanged fittings and fittings incorporating elastomeric seals and to fittings consisting of the assembly of several moulded parts (e.g. union connectors). It is applicable to both pressure and non-pressure fittings.

2 Principle

Complete mouldings are subjected to an elevated specified temperature in an air-circulating oven or a liquid bath for a given period of time, depending upon the wall thickness of the fitting and the material being moulded.

The surfaces of the moulding are examined before and after heating, and any cracks, blisters, delaminations or opening of fusion lines are measured and expressed as a percentage of the wall thickness.

3 Test parameters

The following test parameters are specified by the subclauses referenced as follows and in Table 1 for the particular material used in the manufacturer of the fitting, unless the referring standard (a standard making reference to this International Standard in its own provisions) or regulations specify otherwise:

- a) the test temperature, T (see 4.1.1 and 4.3);
- b) the number of test pieces (see 4.2.2);
- c) the heating time, t (see 4.3.3);
- d) the test method to be used and, for method B (liquid bath) only, the test liquid.
- e) the acceptable limits for the occurrence or dimensions of any cracks or other features found (see 4.3.6).