



# SLOVENSKI STANDARD SIST EN ISO 75-1:2013

01-september-2013

Nadomešča:  
SIST EN ISO 75-1:2004

---

**Polimerni materiali - Ugotavljanje temperature upogiba pod obremenitvijo - 1. del:  
Splošna preskusna metoda (ISO 75-1:2013)**

Plastics - Determination of temperature of deflection under load - Part 1: General test method (ISO 75-1:2013)

Kunststoffe - Bestimmung der Wärmeformbeständigkeitstemperatur - Teil 1: Allgemeines Prüfverfahren (ISO 75-1:2013)

Plastiques - Détermination de la température de fléchissement sous charge - Partie 1: Méthode d'essai générale (ISO 75-1:2013)

**Ta slovenski standard je istoveten z: EN ISO 75-1:2013**

---

**ICS:**

83.080.01	Polimerni materiali na splošno	Plastics in general
-----------	--------------------------------	---------------------

**SIST EN ISO 75-1:2013**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 75-1:2013

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 75-1**

April 2013

ICS 83.080.01

Supersedes EN ISO 75-1:2004

English Version

**Plastics - Determination of temperature of deflection under load  
- Part 1: General test method (ISO 75-1:2013)**

Plastiques - Détermination de la température de  
fléchissement sous charge - Partie 1: Méthode d'essai  
générale (ISO 75-1:2013)

Kunststoffe - Bestimmung der  
Wärmeformbeständigkeitstemperatur - Teil 1: Allgemeines  
Prüfverfahren (ISO 75-1:2013)

This European Standard was approved by CEN on 21 March 2013.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

**Contents**

Page

Foreword.....3

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

[SIST EN ISO 75-1:2013](https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>

## Foreword

This document (EN ISO 75-1:2013) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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 October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

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

This document supersedes EN ISO 75-1:2004.

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

**iTeh STANDARD PREVIEW**  
Endorsement notice  
(standards.iteh.ai)

The text of ISO 75-1:2013 has been approved by CEN as EN ISO 75-1:2013 without any modification.

[SIST EN ISO 75-1:2013](https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 75-1:2013](#)

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>

INTERNATIONAL  
STANDARD

ISO  
75-1

Third edition  
2013-04-15

---

---

**Plastics — Determination of  
temperature of deflection under load —  
Part 1:  
General test method**

*Plastiques — Détermination de la température de fléchissement  
sous charge*

**iTeh STANDARD PREVIEW**  
*Partie 1: Méthode d'essai générale*  
**(standards.iteh.ai)**

[SIST EN ISO 75-1:2013](https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>



Reference number  
ISO 75-1:2013(E)

© ISO 2013

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 75-1:2013

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland



# Contents

	Page
Foreword.....	iv
Introduction.....	v
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Principle</b> .....	<b>2</b>
<b>5 Apparatus</b> .....	<b>3</b>
5.1 Means of producing a flexural stress.....	3
5.2 Heating equipment.....	3
5.3 Weights.....	5
5.4 Temperature-measuring instrument.....	5
5.5 Deflection-measuring instrument.....	5
5.6 Micrometers and gauges.....	5
<b>6 Test specimens</b> .....	<b>6</b>
6.1 General.....	6
6.2 Shape and dimensions.....	6
6.3 Specimen inspection.....	6
6.4 Number of test specimens.....	6
<b>7 Conditioning</b> .....	<b>6</b>
<b>8 Procedure</b> .....	<b>7</b>
8.1 Calculation of force to be applied.....	7
8.2 Initial temperature of the heating equipment.....	8
8.3 Measurement.....	8
<b>9 Expression of results</b> .....	<b>9</b>
<b>10 Precision</b> .....	<b>9</b>
<b>11 Test report</b> .....	<b>9</b>

## ISO 75-1:2013(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.

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 75-1 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical properties*.

This third edition cancels and replaces the second edition (ISO 75-1:2004), which has been technically revised.

ISO 75 consists of the following parts, under the general title *Plastics — Determination of temperature of deflection under load*:

- *Part 1: General test method*
- *Part 2: Plastics and ebonite*
- *Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics*

iTech STANDARD PREVIEW  
(standards.iteh.ai)  
SIST EN ISO 75-1:2013  
<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>

## Introduction

The first editions of this part of ISO 75 and ISO 75-2 described three methods (A, B and C) using different test loads and two specimen positions, edgewise and flatwise. For testing in the flatwise position, test specimens with dimensions 80 mm × 10 mm × 4 mm were required. These can be moulded directly or machined from the central section of the multipurpose test specimen (see ISO 20753).

The previous (i.e. second) editions of this part of ISO 75 and ISO 75-2 specified the flatwise test position as preferred, while still allowing testing in the edgewise position with the test conditions given in Annex A until the next revision of this part of ISO 75 and ISO 75-2, as agreed in ISO/TC 61/SC 2/WG 5. Therefore, with this revision, the edgewise test position will be removed.

At the time of publication, technical development of testing instruments made instruments based on a fluidized bed or air ovens available. These are especially advantageous for use at temperatures at which the common silicone oil-based heat transfer fluids reach their limit of thermal stability. The fluidized bed and air oven methods of heat transfer are introduced in this part of ISO 75.

An additional precision statement covering the new heating methods is introduced in ISO 75-2.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 75-1:2013](https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/743e4258-b08f-4d37-8616-0d70de4a3038/sist-en-iso-75-1-2013>