NSAI Standards

Irish Standard
I.S. EN ISO 9773:1998&A1:2003

Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source (ISO 9773:1998)

I.S. EN ISO 9773:1998&A1:2003

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN ISO 9773:1998/A1:2003

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN ISO 9773:1998	2009-11-16

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2022-05-31	83.080.10
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 9773:1998&A1:2003 is the adopted Irish version of the European Document EN ISO 9773:1998, Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source (ISO 9773:1998)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 9773:1998/A1

September 2003

ICS 13.220.40; 83.080.01

English version

Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source - Amendment 1: Specimens (ISO 9773:1998/Amd 1:2003)

Plastiques - Détermination du comportement au feu d'éprouvettes minces verticales souples au contact d'une petite flamme comme source d'allumage - Amendement 1: Eprouvettes (ISO 9773:1998/Amd 1:2003)

Kunststoffe - Bestimmung des Brandverhaltens von dünnen, biegsamen, vertikal ausgerichteten Probekörpern in Kontakt mit einer kleinen Zündquelle - Änderung 1: Probekörper (ISO 9773:1998/Amd 1:2003)

This amendment A1 modifies the European Standard EN ISO 9773:1998; it was approved by CEN on 24 July 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 amendment 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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, 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

Ref. No. EN ISO 9773:1998/A1:2003 E

CORRECTED 2003-11-05

Foreword

This document (EN ISO 9773:1998/A1:2003) 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 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 March 2004, and conflicting national standards shall be withdrawn at the latest by March 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 9773:1998 has been approved by CEN as EN ISO 9773:1998/A1:2003 without any modifications.

INTERNATIONAL STANDARD

ISO 9773

Second edition
1998-03-01

AMENDMENT 1
2003-09-15

Plastics — Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source

AMENDMENT 1: Specimens

Plastiques — Détermination du comportement au feu d'éprouvettes minces verticales souples au contact d'une petite flamme comme source d'allumage

AMENDEMENT 1: Éprouvettes

Reference number
ISO 9773:1998/Amd.1:2003(E)

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
Web www.iso.org

Published in Switzerland

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.

Amendment 1 to ISO 9773:1998 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

Plastics — Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source

AMENDMENT 1: Specimens

Page 1

In the second sentence of Clause 1, replace “using method B of ISO 1210” by “using method B of IEC 60695-11-10:1999”.

Update Clause 2 (normative references) as follows:

Replace ISO 1210:— by IEC 60695-11-10:1999 and delete the footnote.

Replace ISO 1043-1:1997 by ISO 1043-1:2001 (same title).

Insert 1998 as the year of publication of ISO 10093 and delete the footnote.

Replace ASTM D 5207-91 by ASTM D 5207-98 (same title).

Page 4

Replace Clause 7 “Specimens” by the following clause.

7 Specimens

7.1 It is possible that the results of tests carried out on test specimens taken from materials of different densities, colours, thicknesses, melt flow abilities and directions of anisotropy, or with different additive or filler/reinforcement contents, will be different. For materials with properties or compositions which vary over a range, the test specimens shall be representative of the whole range.

7.2 Test specimens with densities, melt flow abilities and additive or filler/reinforcement contents at the extremes of the range shall be tested and, if the test results yield the same flame test classification, all specimens within the range shall be considered representative of the range. If the burning characteristics are not essentially the same, the results of the evaluation shall be considered to apply only to the materials with the densities, melt flow abilities and additive or filler/reinforcement contents tested. Additional test specimens with intermediate densities, melt flow abilities and additive or filler/reinforcement contents shall be tested to determine the range of applicability.

7.3 Uncoloured test specimens and test specimens with the highest level of organic and inorganic pigment loading shall be tested and, if the test results yield the same flame test classification, all specimens with this colour range shall be considered representative of the range. If a material contains pigments which are known to affect the flammability characteristics, specimens containing these pigments shall also be tested. Thus the test specimens tested shall be those that

a) contain no colouring;

b) contain the highest level of organic pigments;

c) contain the highest level of inorganic pigments;

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9773

March 1998

ICS 83.080.10

Descriptors: see ISO document

English version

Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source (ISO 9773:1998)

Plastiques - Détermination du comportement au feu d'éprouvettes minces verticales souples au contact d'une petite flamme comme source d'allumage (ISO 9773:1998)

This European Standard was approved by CEN on 1 March 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

Avant-propos

Le texte de la norme internationale ISO 9773:1998 a été élaboré par le Comité Technique ISO/TC 61 "Plastiques" en collaboration avec le Comité Technique CEN/TC 249 "Plastiques" dont le secrétariat est tenu par l'IBN.

Cette norme européenne devra recevoir le statut de norme nationale, soit par publication d'un texte identique, soit par entérinement, au plus tard en septembre 1998, et toutes les normes nationales en contradiction devront être retirées au plus tard en septembre 1998.

Selon le Règlement Intérieur du CEN/CENELEC, les instituts de normalisation nationaux des pays suivants sont tenus de mettre cette norme européenne en application: Allemagne, Autriche, Belgique, Danemark, Espagne, Finlande, France, Grèce, Irlande, Islande, Italie, Luxembourg, Norvège, Pays-Bas, Portugal, République Tchèque, Royaume-Uni, Suède et Suisse.

Notice d'entérinement

Le texte de la norme internationale ISO 9773:1998 a été approuvé par le CEN comme norme européenne sans aucune modification.

Corrected 1998-06-04

Foreword

The text of the International Standard ISO 9773:1998 has been prepared by Technical Committee ISO/TC 61 "Pastics" in collaboration with 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 September 1998, and conflicting national standards shall be withdrawn at the latest by September 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 9773:1998 was approved by CEN as a European Standard without any modification.

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

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.

Publication	Year	Title	EN	Year
ISO 291	1997	Plastics - Standard atmospheres for conditioning and testing	EN ISO 291	1997

INTERNATIONAL STANDARD

ISO 9773

Second edition
1998-03-01

Plastics — Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source

Plastiques — Détermination du comportement au feu d'éprouvettes minces verticales souples au contact d'une petite flamme comme source d'allumage

Reference number
ISO 9773:1998(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 9773 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

This second edition cancels and replaces the first edition (ISO 9773:1990) which has been technically revised.

Annex A of this International Standard is for information only.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source

1. Scope

1.1 This International Standard specifies a small- scale laboratory screening procedure for comparing the relative burning behaviour of vertically oriented thin and relatively flexible plastics specimens exposed to a low-energy-level flame ignition source. These specimens cannot be tested using method B of ISO 1210 since they distort or shrink away from the applied flame source without igniting.

1.2 This method of test determines the afterflame and afterglow times of specimens.

1.3 The classification system described in annex A is intended for quality control and the preselection of component materials for products. The classification established by this method of test is applicable only to the material used for the specimens.

NOTE 1 - Test results are influenced by material components, e.g. pigments, fillers, fire-retardant concentrations.

2. Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and 1SO maintain registers of currently valid International Standards.

ISO 291:1997, *Plastics — Standard atmospheres for conditioning and testing.*

ISO 1043-1:l997, *Plastics — Symbols and abbreviated terms — Basic polymers and their special characteristics.*

ISO 1210:—[1)], *Plastics — Determination of the burning behaviour of horizontal and vertical specimens in contact with a small-flame (50 W) ignition source.*

ISO 5725-2:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method.*

ISO 10093:—[2)], *Plastics — Fire tests — Standard ignition sources.*

ASTM D 5207-91, *Standard practice for the calibration of 20 mm and 125 mm test flames for small-scale burning tests on plastic materials."*

---

1) To be published. (Revision of ISO 1210:1992)
2) To be published. (Revision of ISO 10093:1994)