
**Plastics — Determination of burning
behaviour by oxygen index —**

Part 2:
Ambient-temperature test

AMENDMENT 1

*Plastiques — Détermination du comportement au feu au moyen de
l'indice d'oxygène —*

Partie 2: Essai à la température ambiante

AMENDEMENT 1



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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
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 4589-2:1996 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

Plastics — Determination of burning behaviour by oxygen index —

Part 2: Ambient-temperature test

AMENDMENT 1

Page 1, Clause 1

In Note 2, replace the reference to ISO 3582:1978 by ISO 3582:2000, *Flexible cellular polymeric materials — Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame*.

Page 2, Clause 2

Update the normative references as follows:

replace ISO 293:1986 by ISO 293:2004;

replace ISO 294:1995 by ISO 294 (all parts);

replace ISO 295:1991 by ISO 295:2004;

replace ISO 3167:1993 by ISO 3167:2002.

Page 2, Subclause 5.1

Replace the second paragraph by the following:

“The preferred dimensions of the chimney are 500 mm ± 50 mm minimum height and 75 mm to 100 mm inside diameter.”

Page 3, Figure 1

Correct the dimensions of the chimney (top left in figure) to “height 500 mm ± 50 mm, inside diameter 75 mm to 100 mm”.

Page 5, Subclause 5.4

In Note 5, item a), add “or equivalent” after “a paramagnetic oxygen analyser”.

Transfer the existing subclause to new Annex E (see below) and insert in its place the following text:

9.4 Precision of results

9.4.1 An interlaboratory study was conducted in 1999 between ISO and ASTM using ISO 4589-2:1996 and ASTM D 2863-97 as protocols for the test criteria. The precision data were determined from interlaboratory tests involving twelve laboratories, on eight polymeric materials, with two replicates of each material. The resulting data were analysed in accordance with ISO 5725-2, and are summarized in Table 5.

Table 5 — Precision data

Material	Specimen type	Procedure	Oxygen index (OI), %		
			Average	Repeatability	Reproducibility
PMMA-1	III	A	17,7	0,09	0,14
PMMA-2	III	A	17,8	0,35	0,35
PVC, plasticized	III	A	38,4	4,44	6,16
ABS, FR	I	A	26,8	3,33	3,33
PF, thermoset	I	A	49,7	5,45	5,66
PS, foam	II	A	20,9	0,91	1,30
PC, sheet	V	B	26,1	2,37	3,11
PET, film	VI	A	21,9	1,74	2,87

9.4.2 Repeatability, in the normal and correct operation of the method, is the difference between two averages, determined from two specimens, using identical test material and the same apparatus, by one operator within a short time interval. The value of the repeatability should not exceed those shown in Table 5.

9.4.3 Reproducibility, in the normal and correct operation of the method, is the difference between two independent averages determined from two specimens by two operators working in different laboratories on identical test material. The values of the reproducibility should not exceed those shown in Table 5.

9.4.4 Two averages (determined from two specimens) are to be considered suspect and not equivalent if they differ by more than the repeatability and reproducibility shown in Table 5. Any decision made in relation to 9.4.2 or 9.4.3 would have an approximately 95 % (0,95) probability of being correct.

NOTE 25 The explanations of “repeatability” and “reproducibility” given in 9.4.2 and 9.4.3 are only intended to present a meaningful way of considering the approximate precision of this test method. The test results and precision data in Table 5 should not be used for the acceptance or rejection of materials, as these data apply only to the materials tested in the interlaboratory study and are unlikely to be rigorously representative of other lots, formulations, conditions, materials or laboratories. Users of this test method should apply the principles outlined in ISO 4589-2 to generate data specific to their materials and laboratory (or between specific laboratories). The principles of 9.4.2 to 9.4.4 would then be valid for such data.

Create an additional informative annex, Annex E, entitled “Precision data obtained from an interlaboratory trial carried out in 1978-80”. Insert old Subclause 9.4 in this annex, renumbering Table 5 as Table E.1 and Note 25 as Note 28.