

**SLOVENSKI STANDARD**  
**SIST EN 60695-11-20:2000/A1:2004**  
**01-februar-2004**

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**Preskušanje požarne ogroženosti - 11-20. del: Preskusni plameni - Preskusne metode s 500-vatnim plamenom (IEC 60695-11-20:1999/A1:2003)**

Fire hazard testing -- Part 11-20: Test flames - 500 W flame test methods

Prüfungen zur Beurteilung der Brandgefahr -- Teil 11-20: Prüfflammen - Prüfverfahren mit einer 500-W-Prüfflamme

Essais relatifs aux risques du feu -- Partie 11-20: Flamme d'essai - Méthodes d'essai à la flamme de 500 W

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**Ta slovenski standard je istoveten z: EN 60695-11-20:1999/A1:2003**

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**ICS:**

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
29.020	Elektrotehnika na splošno	Electrical engineering in general

**SIST EN 60695-11-20:2000/A1:2004**      **en**

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EUROPEAN STANDARD

**EN 60695-11-20/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2003

ICS 13.220.40;29.020

English version

**Fire hazard testing**  
**Part 11-20: Test flames –**  
**500 W flame test methods**  
(IEC 60695-11-20:1999/A1:2003)

Essais relatifs aux risques du feu  
Partie 11-20: Flammes d'essai –  
Méthodes d'essai à la flamme de 500 W  
(CEI 60695-11-20:1999/A1:2003)

Prüfungen zur Beurteilung der  
Brandgefahr  
Teil 11-20: Prüfflammen –  
Prüfverfahren  
mit einer 500-W-Prüfflamme  
(IEC 60695-11-20:1999/A1:2003)

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This amendment A1 modifies the European Standard EN 60695-11-20:1999; it was approved by CENELEC on 2003-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 89/588/FDIS, future amendment 1 to IEC 60695-11-20:1999, prepared by IEC TC 89, Fire hazard testing, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60695-11-20:1999 on 2003-09-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2004-06-01
- latest date by which the national standards conflicting  
with the amendment have to be withdrawn (dow) 2006-09-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of amendment 1:2003 to the International Standard IEC 60695-11-20:1999 was approved by CENELEC as an amendment to the European Standard without any modification.

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[SIST EN 60695-11-20:2000/A1:2004](https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-2d8f8db5bc9c/sist-en-60695-11-20-2000-a1-2004)

<https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-2d8f8db5bc9c/sist-en-60695-11-20-2000-a1-2004>

## Annex ZA (normative)

### Normative references to international publications with their corresponding 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 When 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/HD</u>	<u>Year</u>
<b>Add:</b>				
ISO 9773	1998	Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source	-	-

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NORME  
INTERNATIONALE  
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AMENDEMENT 1  
AMENDMENT 1  
2003-06

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PUBLICATION FONDAMENTALE DE SÉCURITÉ  
BASIC SAFETY PUBLICATION

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Amendement 1

**Essais relatifs aux risques du feu –**

**Partie 11-20:**  
**Flammes d'essai –**  
**Méthodes d'essai à la flamme de 500 W**

[SIST EN 60695-11-20:2000/A1:2004](https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-11-20-2000-a1-2004)

<https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-11-20-2000-a1-2004>  
Amendment 1

**Fire hazard testing –**

**Part 11-20:**  
**Test flames –**  
**500 W flame test methods**

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CODE PRIX  
PRICE CODE

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*Pour prix, voir catalogue en vigueur  
For price, see current catalogue*

## FOREWORD

This amendment has been prepared by IEC technical committee 89: Fire hazard testing.

The text of this amendment is based on the following documents:

FDIS	Report on voting
89/588/FDIS	89/597/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table. In ISO, the amendment has been approved by 15 P-members out of 15 having cast a vote.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2010. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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

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### 2 Normative references

[SIST EN 60695-11-20:2000/A1:2004](https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-2d8f8db5bc9c/sist-en-60695-11-20-2000-a1-2004)

Add the following new reference:  
<https://standards.iteh.ai/catalog/standards/sist/7bd72f23-7880-4d81-a38e-2d8f8db5bc9c/sist-en-60695-11-20-2000-a1-2004>

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

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### 7 Specimens

Replace the text of the existing Clause 7 by the following:

#### 7.1 End product testing

Test specimens shall be cut from a representative sample of the moulded material taken from an end product. Where this is not possible, the test specimen shall be produced using the same fabrication process as would be normally used to mould a part of a product; and where this is not possible, the appropriate ISO method shall be used, e.g. casting and injection moulding in accordance with ISO 294, compression moulding in accordance with ISO 293 or ISO 295, or transfer moulding to the necessary shape.

If it is not possible to prepare test specimens by any of the methods outlined above, a type test shall be performed using the needle flame test in accordance with IEC 60695-2-2.



After any cutting operation, care shall be taken to remove all dust and any particles from the surface; cut edges shall be fine sanded to a smooth finish.

## 7.2 Material testing

The results of tests carried out on test specimens of different colour, thickness, density, molecular mass, anisotropic direction and type, or with different additives or fillers/reinforcements can vary.

Test specimens with extremes of density, melt flows and filler/reinforcement content may be provided and considered representative of the range if the test results yield the same flame test classification. If the test results do not yield the same flame test classification for all test specimens representing the range, evaluation shall be limited to the materials with the extremes of density, melt flows and filler/reinforcement contents tested. In addition, test specimens with intermediate density, melt flows, and filler/reinforcement content shall be tested to determine the representative range for each flame classification.

## 7.3 Bar test specimens

Bar test specimens shall measure  $125 \text{ mm} \pm 5 \text{ mm}$  long by  $13,0 \text{ mm} \pm 0,5 \text{ mm}$  wide, and shall be provided in the minimum thickness normally supplied. The thickness shall not exceed  $13,0 \text{ mm}$ . Edges shall be smooth, and the radius on the corners shall not exceed  $1,3 \text{ mm}$ . Other thicknesses may be used by agreement between the interested parties and, if so, shall be noted in the test report (see Figure 4a).

Uncoloured test specimens and test specimens with the highest level of organic and inorganic pigment loading by weight are considered representative of the colour range, if the test results yield the same flame test classification. When certain pigments are known to affect flammability characteristics, the test specimens containing those pigments shall also be tested. Test specimens which shall be tested are those that

- a) contain no colouring,
- b) contain the highest level of organic pigments,
- c) contain the highest level of inorganic pigments,
- d) contain pigments which are known to adversely affect flammability characteristics.

## 7.4 Plate test specimens

Plate test specimens shall measure  $150 \text{ mm} \pm 5 \text{ mm}$  long by  $150 \text{ mm} \pm 5 \text{ mm}$  wide and provided in the minimum thickness normally supplied. The thickness shall not exceed  $13,0 \text{ mm}$ . Other thicknesses may be used by agreement between the interested parties and, if so, shall be noted in the test report (see Figure 4b).

Uncoloured test specimens, or one normally supplied colour of test specimen, shall be tested, and considered representative of the colour range.

If a 5VA classification is required, plate test specimens must be tested. For the determination of the 5VB classification, there is no need to test the plate test specimens.