

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Amendment No. 1
to
AS/NZS 60695.11.20:2001
FIRE HAZARD TESTING –**

**Part 11.20: Test flames – 500 W
flame test methods**

REVISED TEXT

The 2001 edition of AS/NZS 60695.11.20 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This amendment applies to Preface, Clauses 2, 7, 8.4, Annex A and Bibliography.

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Approved for publication in New Zealand by the Standards Council of New Zealand on 26 March 2004

All parts of this Amendment form part of the standard from the date of publication.

Preface

Replace the fourth paragraph by the following:

This Standard is identical to and is reproduced from IEC 60695-11-20:1999, *Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods*, including its Corrigendum 1 (2000-02) and amendment 1 (2003-06).

2 Normative references

Add the following new reference:

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

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.

A minimum of 20 bar test specimens and 12 plate test specimens, if needed, shall be prepared.

8.4 Classification

Replace, in Table 1, under the column marked Criteria, the existing third row by the following:

Did the bar test specimen burn up completely?