AS/NZS 60695.11.3:2001
IEC 60695-11-3:2000

Australian/New Zealand Standard™

Fire hazard testing

Part 11.3: Test flames—500 W flames—Apparatus and confirmational test methods

Standards Australia

STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/2 - Safety of household and similar electrical appliances and small power transformers. It was approved on behalf of the Council of Standards Australia on 2 October 2001 and on behalf of the Council of Standards New Zealand on 12 October 2001. It was published on 12 November 2001.

The following interests are represented on Committee EL/2:

Association of Certification Bodies
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association New Zealand
Consumer Electronic Suppliers Association, Australia
Electrical regulatory authorities, Australia
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

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AS/NZS 60695.11.3:2001
(IEC 60695-11-3:2000, IDT)

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PREFACE

This standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002- Safety of Household and Similar Electrical Appliances and Small Power Transformers.

The objective of this Standard is provide guidance to manufacturers, designers testing laboratories and similar organizations on test methods to assess the fire hazard of electrotechnical products and for the resulting development of fire hazard testing as related directly to harm to people, animals or property.

Products as defined in this standard, relate to materials, components or complete end products.

This standard will be of interest to organizations concerned with the avoidance of risk of fire associated with buildings.

This Standard forms the first edition of AS/NZS 60695.11.3, *Fire hazard testing* - Part 11.3: *Test flames – 500 W flames – Apparatus and confirmational tests.*

This Standard is identical to and is reproduced from IEC 60695-11-3:2000, *Fire hazard testing* - Part 11-3: *Test flames – 500 W flames – Apparatus and confirmational tests.*

It is to be used in conjunction with AS/NZS 60695.1.1 and AS/NZS 4695.4.

Annexes C and D are normative and form an integral part of this standard. Annexes A, B E and F are for information only.

Clause 2 has been reformatted to indicate the Australia/New Zealand standard that is equivalent to the IEC standard or ISO standard to which normative reference is made.

As this Standard is reproduced from an International Standard, the following applies:

a) Its number does not appear on each page of text and its identity is shown on the cover and title page only.
b) In the source text "IEC 60695" should read "AS/NZS 60695".
c) A full point substitutes for a comma when referring to a decimal marker.

INTRODUCTION

IEC 60695-11-3 gives:

a) guidance on the design and use of flame test methods to assess the effect on the specimen of flames such as may arise from other ignited items in the vicinity, or from a fire in its early stages;

b) a general description of the apparatus required to produce the test flame;

c) a general description of the principle of a calibration procedure to check that the flame produced meets the requirements.

The detailed description of the apparatus needed to produce and verify the test flames is given in a series of sheets, of which this is one.

The status of the series, currently under study, is summarized in the following table:

Test flame	**Type**	**Gas**	**Present status**	**Apparent overall height** mm
500 (A)	Pre-mixed	Methane	Method A of this technical specification	Circa 125
500 (B)	Pre-mixed	Propane	Method B of this technical specification	Circa 125
500 (C)	Pre-mixed	Methane/ propane	Method C of this technical specification	Circa 125
500 (D)	Pre-mixed	Methane	Method D of this technical specification	Circa 125
NOTE IEC 60695-2-4/1 describes the apparatus and confirmational test method for a 1 000 W nominal test flame and IEC 60695-11-4 describes the apparatus and confirmational test method for a 50 W nominal test flame.				

The aim of the work, which was initiated by ACOS, is to make available an appropriate (minimum) series of standardized test flames, covering a range of powers for the use of all committees needing test flames. Wherever possible these test flames have been based on existing types, but with improved specifications.

Four methods A, B, C and D for producing the 500 W nominal test flame have been developed and are described in this technical specification. Methods A and B were published in 1994 and were based on existing hardware. Methods C and D are based on non-adjustable hardware that has been specifically developed to produce highly repeatable and stable test flames.

The four test flames are as follows:

– flame A, based on methane, makes use of a more tightly specified version of a burner that has been used in some countries for many years;

– flame B, based on propane, makes use of the same hardware as that described in IEC 60695-2-4/1 for the 1 kW test flame;

– flame C, makes use of a more highly developed version of the burner that is used in method A, and is capable of being produced using either methane or propane;

– flame D, based on methane, also makes use of a more highly developed version of the burner that is used in method A.

Users may find that flame C is more stable but that the hardware used to produce flame D is more convenient to handle.

AUSTRALIA/NEW ZEALAND STANDARD

FIRE HAZARD TESTING –

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1 Scope

This technical specification gives the detailed requirements for the production of a nominal 500 W, pre-mixed type test flame. The approximate overall height is 125 mm.

Four methods are given: flames A and D may only be produced using methane, flame B may only be produced using propane and flame C may be produced using either methane or propane.

One of the responsibilities of a technical committee is, wherever applicable, to make use of basic safety publications in the preparation of its publications.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this technical specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this technical specification are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC or ISO standard	Year	Title	AU/NZ standard	Year
IEC 60584-1	1995	*Thermocouples – Part 1: Reference tables*		
IEC 60584-2	1982	*Thermocouples – Part 2: Tolerances*		
IEC 60695-1-1	1995	*Fire hazard testing – Part 1: Guidance for assessing fire hazard of electrotechnical products – Section 1: General guidance*	AS/NZS 60695.1.1	2001
IEC 60695-1-2	1982	*Fire hazard testing – Part 1: Guidance for the preparation of requirements and test specifications for assessing fire hazard of electrotechnical products – Guidance for electronic components*		