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Australian/New Zealand Standard™

Tests on electric and optical fibre cables under fire conditions

Part 1.3: Test for vertical flame propagation for a single insulated wire or cable—Procedure for determination of flaming droplets/particles

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Australian Cable Makers' Association
Australian Industry Group
Electrical Compliance Testing Association
Electrical Contractors Association of New Zealand
Electrical Regulatory Authorities Council
Institute of Electrical Inspectors
National Electrical and Communications Association
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, EL-003 Electric Wires and Cables, to supersede, in part, AS/NZS 1660.5.6:2005, *Test methods for electric cables, cords and conductors*, Method 5.6: *Fire tests—Test for vertical flame propagation for a single insulated wire or cable*.

The objective of this Standard is to specify a test procedure for assessment of falling flaming droplets/particles when a single vertical electrical insulated conductor or cable, or optical fibre cable, is subjected to defined fire conditions.

This Standard is identical with, and has been reproduced from IEC 60332-1-3, Ed. 1.1 (2015), *Tests on electric and optical fibre cables under fire conditions*, Part 1-3: *Test for vertical flame propagation for a single insulated wire or cable—Procedure for determination of flaming droplets/particles*.

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

(a) In the source text ‘this part of 60332 should read ‘this Australian/New Zealand Standard’.

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

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AUSTRALIAN/NEW ZEALAND STANDARD

Tests on electric and optical fibre cables under fire conditions

Part 1.3: Test on vertical flame propagation for a single insulated wire or cable— Procedure for determination of flaming droplets/particles

1 Scope

This part of IEC 60332 specifies a test procedure for assessment of falling flaming droplets/ particles when a single vertical electrical insulated conductor or cable, or optical fibre cable, is subjected to defined fire conditions.

NOTE 1 Testing to IEC 60332-1-3 may be performed simultaneously with that to IEC 60332-1-2, if required.

Recommended requirements for performance are given in Annex A.

IEC 60332-1-3 specifies the use of a 1 kW pre-mixed flame and is for general use, except that the procedure specified may not be suitable for the testing of small single insulated conductors or cables of less than 0,5 mm^2 total cross-section because the conductor melts before the test is completed, or for the testing of small optical fibre cables because the cable is broken before the test is completed.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60332-1-1, *Tests on electric and optical fibre cables under fire conditions – Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus*

IEC 60811-203, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions*

IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions, apply. Some definitions are taken from IEC 60695-4.

3.1
ignition source
source of energy that initiates combustion

[SOURCE: ISO 13943:2008, 1.489]