AS/NZS IEC 60332.1.1:2017
IEC 60332-1-1:2004+AMD1:2015 CSV
(Reissued with corrected text)

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Australian/New Zealand Standard™

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

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AS/NZS IEC 60332.1.1:2017

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Australian Cablemakers
Association
Australian Industry Group
Electrical Compliance Testing Association of Australia
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Electrical Regulatory Authorities Council
Institute of Electrical Inspectors
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First published in Australia as part of AS 1660.4—1974.
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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 the test apparatus for testing the resistance to vertical flame propagation for a single vertical electrical insulated conductor or cable, or optical fibre cable, under fire conditions.

This Standard is identical with, and has been reproduced from IEC 60332-1-1, Ed. 1.1 (2015), *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*.

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

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This Consolidated version of IEC 60332-1-1 bears the edition number 1.1. It consists of the first edition (2004-07) [documents 20/696/FDIS and 20/710/RVD] and its amendment 1 (2015-07) [documents 20/1590/FDIS and 20/1597/RVD]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 60332-1-1 has been prepared by IEC technical committee 20: Electric cables.

It has the status of a group safety publication in accordance with IEC Guide 104.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 60332 consists of the following parts, under the general title *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

Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1kW pre-mixed flame

Part 1-3: Test for vertical flame propagation for a single insulated wire or cable – Procedure for determination of flaming droplets/particles

Part 2-1: Test for vertical flame propagation for a single small insulated wire or cable – Apparatus

Part 2-2: Test for vertical flame propagation for a single small insulated wire or cable - Procedure for diffusion flame

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

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

1 Scope

This part of IEC 60332 specifies the test apparatus for testing the resistance to vertical flame propagation for a single vertical electrical insulated conductor or cable, or optical fibre cable, under fire conditions.

The procedure, together with an informative annex of recommended requirements for performance, is given in IEC 60332-1-2.

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 60695-4, *Fire hazard testing – Part 4: Terminology concerning fire tests*

IEC 60695-11-2, *Fire hazard testing – Part 11-2: Test flames – 1 kW nominal pre-mixed flame – Apparatus, confirmatory test arrangement and guidance*

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 definition applies. The definition is taken from IEC 60695-4.

3.1
ignition source
source of energy that initiates combustion

[SOURCE: ISO 13943:2008, 4.189]

4 Test apparatus

4.1 Components

The test apparatus shall comprise the following:

a) a metal enclosure (4.2);

b) an ignition source (4.3);

c) a suitable chamber (4.4).