

CONSOLIDATED VERSION

VERSION CONSOLIDÉE



GROUP SAFETY PUBLICATION
PUBLICATION GROUPEE DE SÉCURITÉ

**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**

**Essais des câbles électriques et à fibres optiques soumis au feu –
Partie 1-3: Essai de propagation verticale de la flamme sur conducteur ou câble
isolé – Procédure pour la détermination des particules/gouttelettes enflammées**



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.220.40; 29.020; 29.060.20

ISBN 978-2-8322-2832-6

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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**

FOREWORD

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This Consolidated version of IEC 60332-1-3 bears the edition number 1.1. It consists of the first edition (2004-07) [documents 20/698/FDIS and 20/712/RVD] and its amendment 1 (2015-07) [documents 20/1592/FDIS and 20/1599/RVD]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60332-1-3 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

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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

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 mm² 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*

~~ISO 187, Paper – board and pulps – Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples~~

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

[~~IEC 60695-4:1993, definition 2.76~~ SOURCE: ISO 13943:2008, 1.489]