

CONSOLIDATED VERSION

VERSION CONSOLIDÉE



Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements

Mesure de la densité de fumées dégagées par des câbles brûlant dans des conditions définies – Partie 2: Procédure d'essai et exigences



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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VERSION REDLINE



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Mesure de la densité de fumées dégagées par des câbles brûlant dans des conditions définies – Partie 2: Procédure d'essai et exigences

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEASUREMENT OF SMOKE DENSITY OF CABLES BURNING UNDER DEFINED CONDITIONS –

Part 2: Test procedure and requirements

FOREWORD

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This Consolidated version of IEC 61034-2 bears the edition number 3.2. It consists of the third edition (2005-04) [documents 20/755/FDIS and 20/767/RVD], its corrigendum 1 (2006-09), its amendment 1 (2013-06) [documents 20/1429/FDIS and 20/1444/RVD] and its amendment 2 (2019-11) [documents 20/1886/FDIS and 20/1892/RVD]. The technical content is identical to the base edition and its amendments.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61034-2 has been prepared by IEC technical committee 20: Electric cables.

The principal changes with respect to the previous edition are as follows:

- a) inclusion of cables down to 1 mm diameter;
- b) inclusion of non-circular cables;
- c) addition of guidance on testing cables above 80 mm diameter;
- d) delineation of elements of the test report;
- e) addition of guidance on the calculation for other parameters for fire safety engineering purposes;
- f) removal of minor differences with equivalent CENELEC work to allow parallel voting with that body.

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 61034 consists of the following parts, under the general title *Measurement of smoke density of cables burning under defined conditions*,

Part 1 : Test apparatus

Part 2 : Test procedure and requirements

The committee has decided that the contents of the base publication and its amendments 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,
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INTRODUCTION

The measurement of smoke density is an important aspect in the evaluation of the burning performance of cables as it is related to the evacuation of persons and accessibility for firefighting.

IEC 61034 is published in two parts, which together specify a method of test for measurement of smoke density of cables burning under defined conditions. Users of this test are reminded that the configurations of cable in the test (i.e. as test pieces or bundles of test pieces) may not represent actual installation conditions.

Part 1 gives details of the test apparatus and verification procedure to be used for the measurement of smoke density of the products of combustion of cables burnt under defined conditions. It includes details of a test enclosure of 27m³ volume, a photometric system for light measurement, the fire source, smoke mixing method and a qualification procedure.

This Part 2 gives the test procedure, together with an informative annex giving recommended requirements for compliance where no specified requirement is given in the particular cable standard or specification. The measurement of smoke density is expressed in terms of minimum levels of light transmittance, and Annex A explains possibilities for using these values for fire safety engineering calculations.