
Preskušanje požarne ogroženosti – 6-1. del: Otemnitev dima – Splošna navodila (IEC 60695-6-1:2005)

Fire hazard testing – Part 6-1: Smoke obscuration – General guidance (IEC 60695-6-1:2005)

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English version

Fire hazard testing
Part 6-1: Smoke obscuration –
General guidance
(IEC 60695-6-1:2005)

Essais relatifs aux risques du feu
Partie 6-1: Opacité des fumées –
Lignes directrices générales
(CEI 60695-6-1:2005)

Prüfungen zur Beurteilung
der Brandgefahr
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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 89/692/FDIS, future edition 2 of IEC 60695-6-1, prepared by IEC TC 89, Fire hazard testing, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60695-6-1 on 2005-05-01.

This European Standard supersedes EN 60695-6-1:2001.

The main changes with respect to EN 60695-6-1:2001 are:

- modified title;
- updated normative references;
- expanded terms and definitions;
- numerous editorial changes of a technical nature throughout the publication;
- a flowchart has been added for the evaluation and consideration of smoke test methods.

This European Standard is to be used in conjunction with IEC/TS 60695-6-2.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2006-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-05-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60695-6-1:2005 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60695-1-1	- ¹⁾	Fire hazard testing Part 1-1: Guidance for assessing the fire hazard of electrotechnical products - General guidelines	EN 60695-1-1	2000 ²⁾
IEC 60695-4	1993	Part 4: Terminology concerning fire tests	EN 60695-4	1995
A1	1995		-	-
A2	2001		-	-
IEC 60695-6-2	2001	Part 6-2: Smoke obscuration - Summary and relevance of test methods	-	-
IEC 60695-6-30	- ¹⁾	Part 6: Guidance and test methods on the assessment of obscuration hazard of vision caused by smoke opacity from electrotechnical products involved in fires - Section 30: Small-scale static method - Determination of smoke opacity - Description of the apparatus	-	-
IEC 60695-6-31	- ¹⁾	Part 6-31: Smoke obscuration - Small-scale static test - Materials	-	-
IEC Guide 104	1997	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO/TR 9122-1	1989	Toxicity testing of fire effluents Part 1: General	-	-
ISO 5659-2	1994	Plastics - Smoke generation Part 2: Determination of capital density by a single-chamber test	EN ISO 5659-2	1998
ISO 13943	2000	Fire safety - Vocabulary	EN ISO 13943	2000
ISO/IEC Guide 51	1999	Safety aspects - Guidelines for their inclusion in standards	-	-

1) Undated reference.

2) Valid edition at date of issue.

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Deuxième édition
Second edition
2005-05

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BASIC SAFETY PUBLICATION

Essais relatifs aux risques du feu –

**Partie 6-1:
Opacité des fumées –
Lignes directrices générales**

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**Smoke obscuration –
General guidance**

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International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIRE HAZARD TESTING –

Part 6-1: Smoke obscuration –
General guidance

FOREWORD

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International Standard IEC 60695-6-1 has been prepared by IEC technical committee 89: Fire hazard testing.

This second edition cancels and replaces the first edition of IEC 60695-6-1 published in 2001. It constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- Modified title.
- Updated normative references.
- Expanded terms and definitions.
- Numerous editorial changes of a technical nature throughout the publication.
- A flowchart has been added for the evaluation and consideration of smoke test methods.

It has the status of a basic safety publication in accordance with IEC Guide 104 and ISO/IEC Guide 51.

The text of this standard is based on the following documents:

FDIS	Report on voting
89/692/FDIS	89/696/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This standard is to be used in conjunction with IEC 60695-6-2.

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

The IEC 60695-6 series, under the general heading *Fire hazard testing*, consists of the following parts

- Part 6-1: Smoke obscuration – General guidance
- Part 6-2: Smoke obscuration – Summary and relevance of test methods
- Part 6-30: Smoke obscuration – Guidance and test methods on the assessment of obscuration hazard of vision caused by smoke opacity from electrotechnical products involved in fires – Small scale static method - Determination of smoke opacity - Description of the apparatus
- Part 6-31: Smoke obscuration – Small-scale static test – Materials

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

INTRODUCTION

The risk of fire needs to be considered in any electrical circuit, and the objective of component, circuit and equipment design, as well as the choice of material, is to reduce the likelihood of fire, even in the event of foreseeable abnormal use, malfunction or failure.

Electrotechnical products, primarily victims of a fire, may nevertheless contribute to the fire. One of the contributing hazards is the release of smoke, which may cause loss of vision and/or disorientation which could impede escape from the building or fire fighting.

Smoke particles reduce the visibility due to light absorption and scattering. Consequently, people may experience difficulties in finding exit signs, doors and windows. Visibility is often determined as the distance at which an object is no longer visible. It depends on many factors, but close relationships have been established between visibility and the measurements of the extinction coefficient of smoke – see Annex A.

The production of smoke and its optical properties can be measured as well as other fire properties, such as heat release, flame spread, and the production of toxic gas and corrosive effluent. This part of IEC 60695-6 serves as a guidance document and focuses on obscuration of light by smoke.

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