SLOVENSKI STANDARD

SIST EN 60695-6-1:2002

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Fire hazard testing - Part 6-1: Smoke opacity - General guidance

ICS 13.220.40; 29.020

Referenčna številka
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60695-6-1

October 2001

ICS 13.220.99; 29.020

English version

Fire hazard testing
Part 6-1: Smoke opacity - General guidance
(IEC 60695-6-1:2001)

Essais relatifs aux risques du feu
Partie 6-1: Opacité des fumées -
Guide général
(CEI 60695-6-1:2001)

Prüfungen zur Beurteilung der
Brandgefahr
Teil 6-1: Verdunkelung durch Rauch -
Allgemeiner Leitfaden
(IEC 60695-6-1:2001)

This European Standard was approved by CENELEC on 2001-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Ref. No. EN 60695-6-1:2001 E

Foreword

The text of document 89/447/FDIS, future edition 1 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 2001-10-01.

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)	2002-07-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2004-10-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annexes A, B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60695-6-1:2001 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates? by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references? the latest edition of the publication referred to applies (including amendments).

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

Publication	Year	Title	EN/HD	Year
IEC 60695-1-1 + corr. January	1999 2000	Fire hazard testing Part 1-1: Guidance for assessing the fire hazard of electrotechnical products - General guidelines	EN 60695-1-1	2000
IEC 60695-6-2	2001	Part 6-2: Smoke obscuration - Summary and relevance of test methods	-	-
IEC 60695-6-30	1996	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	1999	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/IEC 13943	2000	Fire safety - Vocabulary	EN ISO 13943	2000

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BASIC SAFETY PUBLICATION

Essais relatifs aux risques du feu –

Partie 6-1: Opacité des fumées – Guide général

Fire hazard testing –

Part 6-1: Smoke opacity – General guidance

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

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

This standard constitutes part 6-1 of IEC 60695. IEC 60695-6-2[1)] is a summary of test methods; IEC 60695-6-30 and IEC 60695-6-31 describe a small scale static test method.

This standard has the status of a basic safety publication in accordance with IEC Guide 104.

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

FDIS	Report on voting
89/447/FDIS	89/455/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 publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

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

1) To be published.

Annexes A, B, and C are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2006. 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 hazard due to 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 may be measured simultaneously with other fire properties, such as heat release and flame spread. This part of IEC 60695 serves as a guidance document and focuses on obscuration of light by smoke.