SLOVENSKI STANDARD
SIST EN 60695-8-1:2017

01-april-2017

Nadomešča:
SIST EN 60695-8-1:2008

Preskušanje požarne ogroženosti - 8-1. del: Oddajanje toplote - Splošno navodilo (IEC 60695-8-1:2016)

Fire hazard testing - Part 8-1: Heat release - General guidance (IEC 60695-8-1:2016)

Prüfungen zur Beurteilung der Brandgefahr - Teil 8 -1: Wärmefreisetzung - Allgemeiner Leitfaden (IEC 60695-8-1:2016)

Essais relatifs aux risques du feu - Partie 8-1: Dégagement de chaleur - Guide général (IEC 60695-8-1:2016)

Ta slovenski standard je istoveten z: **EN 60695-8-1:2017**

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
29.020	Elektrotehnika na splošno	Electrical engineering in general

SIST EN 60695-8-1:2017 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60695-8-1

February 2017

ICS 13.220.40; 29.020

Supersedes EN 60695-8-1:2008

English Version

Fire hazard testing - Part 8-1: Heat release - General guidance (IEC 60695-8-1:2016)

Essais relatifs aux risques du feu - Partie 8-1: Dégagement de chaleur - Guide général (IEC 60695-8-1:2016)

Prüfungen zur Beurteilung der Brandgefahr - Teil 8-1: Wärmefreisetzung - Allgemeiner Leitfaden (IEC 60695-8-1:2016)

This European Standard was approved by CENELEC on 2016-12-20. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 89/1342/FDIS, future edition 3 of IEC 60695-8-1, prepared by IEC/TC 89 "Fire hazard testing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60695-8-1:2017.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2017-09-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-12-20

This document supersedes EN 60695-8-1:2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60695-8-1:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60695-1-10	NOTE	Harmonized as EN 60695-1-10.
IEC 60695-1-11	NOTE	Harmonized as EN 60695-1-11.
IEC 60695-1-12	NOTE	Harmonized as EN 60695-1-12.
ISO 1716	NOTE	Harmonized as EN ISO 1716.
IEC 60836:2015	NOTE	Harmonized as EN 60836:2015.
IEC 61099:2010	NOTE	Harmonized as EN 61099:2010.
IEC 60867:1993	NOTE	Harmonized as EN 60867:1994.
IEC 60296:2012	NOTE	Harmonized as EN 60296:2012.
ISO 13927	NOTE	Harmonized as EN ISO 13927.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60695-4	2012	Fire hazard testing -- Part 4: Terminology concerning fire tests for electrotechnical products	EN 60695-4	2012
IEC 60695-8-2	-	Fire hazard testing -- Part 8-2: Heat release - Summary and relevance of test methods	FprEN 60695-8-2	-
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO 13943	2008	Fire safety - Vocabulary	EN ISO 13943	2010
ISO/IEC Guide 51	-	Safety aspects - Guidelines for their inclusion in standards	-	-

IEC 60695-8-1

Edition 3.0 2016-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC SAFETY PUBLICATION

PUBLICATION FONDAMENTALE DE SÉCURITÉ

Fire hazard testing –
Part 8-1: Heat release – General guidance

Essais relatifs aux risques du feu –
Partie 8-1: Dégagement de chaleur – Guide général

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 13.220.40; 29.020

ISBN 978-2-8322-3749-6

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIRE HAZARD TESTING –

Part 8-1: Heat release – General guidance

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60695-8-1 has been prepared by IEC technical committee 89: Fire hazard testing.

This third edition cancels and replaces the second edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) a modified Introduction;
b) reference to IEC 60695-1-12;
c) updated normative references;
d) revised terms and definitions;
e) new text in 4.2.2, 4.2.3, 6.1 and 6.4, including several mandatory statements;
f) mandatory statements in a new Subclause 6.5.

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

FDIS	Report on voting
89/1342/FDIS	89/1348/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 2.

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

This standard is to be used in conjunction with IEC 60695-8-2.

A list of all the parts in the IEC 60695 series, under the general title *Fire hazard testing*, can be found on the IEC website.

IEC 60695-8 consists of the following parts:

Part 8-1: *Heat release – General guidance*

Part 8-2: *Heat release – Summary of test methods*

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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

In the design of any electrotechnical product, the risk of fire and the potential hazards associated with fire need to be considered. In this respect the objective of component, circuit and equipment design as well as the choice of materials is to reduce the risk of fire to a tolerable level even in the event of reasonably foreseeable (mis)use, malfunction or failure. IEC 60695-1-10 [1][1] provides guidance on how this is to be accomplished.

Fires involving electrotechnical products can be initiated from external non-electrical sources. Considerations of this nature are dealt with in an overall risk assessment.

The aim of the IEC 60695 series of standards is to save lives and property by reducing the number of fires or reducing the consequences of the fire. This can be accomplished by:

- trying to prevent ignition caused by an electrically energised component part and, in the event of ignition, to confine any resulting fire within the bounds of the enclosure of the electrotechnical product;
- trying to minimise flame spread beyond the product's enclosure and to minimise the harmful effects of fire effluents including heat, smoke, and toxic or corrosive combustion products.

Fires are responsible for creating hazards to life and property as a result of the generation of heat (thermal hazard), toxic and/or corrosive compounds and obscuration of vision due to smoke. Fire risk increases as the heat released increases, possibly leading to a flash-over fire.

One of the most important measurements in fire testing is the measurement of heat release, and it is used as an important factor in the determination of fire hazard; it is also used as one of the parameters in fire safety engineering calculations.

The measurement and use of heat release data, together with other fire test data, can be used to reduce the likelihood of (or the effects of) fire, even in the event of reasonably foreseeable (mis)use, malfunction or failure of electrotechnical products.

When a material is heated by some external source, fire effluent can be generated and can form a mixture with air, which can ignite and initiate a fire. The heat released in the process is carried away by the fire effluent-air mixture, radiatively lost or transferred back to the solid material, to generate further pyrolysis products, thus continuing the process.

Heat may also be transferred to other nearby products, which may burn, and then release additional heat and fire effluent.

The rate at which thermal energy is released in a fire is defined as the heat release rate. Heat release rate is important because of its influence on flame spread and on the initiation of secondary fires. Other characteristics are also important, such as ignitability, flame spread and the side-effects of the fire (see the IEC 60695 series of standards).

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1 Numbers in square brackets refer to the Bibliography.