SLOVENSKI STANDARD
SIST EN 60695-8-2:2017

01-maj-2017

Preskušanje požarne ogroženosti - 8-2. del: Oddajanje toplote - Pregled in primernost preskusnih metod (IEC 60695-8-2:2016)

Fire hazard testing - Part 8-2: Heat release - Summary and relevance of test methods (IEC 60695-8-2:2016)

Essais relatifs aux risques du feu - Partie 8-2: Dégagement de chaleur - Résumé et pertinence des méthodes d'essais (IEC 60695-8-2:2016)

Ta slovenski standard je istoveten z: EN 60695-8-2:2017

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 60695-8-2:2017 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60695-8-2

March 2017

ICS 13.220.40; 29.020

English Version

Fire hazard testing - Part 8-2: Heat release - Summary and relevance of test methods (IEC 60695-8-2:2016)

Essais relatifs aux risques du feu - Partie 8-2: Dégagement de chaleur - Résumé et pertinence des méthodes d'essais (IEC 60695-8-2:2016)

Prüfungen zur Beurteilung der Brandgefahr - Teil 8-2: Wärmefreisetzung - Zusammenfassung und Anwendbarkeit von Prüfverfahren (IEC 60695-8-2:2016)

This European Standard was approved by CENELEC on 2016-12-21. 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.

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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

Ref. No. EN 60695-8-2:2017 E

European foreword

The text of document 89/1343/FDIS, future edition 1 of IEC 60695-8-2, prepared by IEC/TC 89 "Fire hazard testing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60695-8-2:2017.

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) 2017-09-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-12-21

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 60695-8-2:2016 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:

ISO 1716:2010	NOTE	Harmonized as EN ISO 1716:2010 (not modified).
ISO 1182	NOTE	Harmonized as EN ISO 1182.
IEC 60332-3-10	NOTE	Harmonized as EN 60332-3-10.
IEC 60695-1-11	NOTE	Harmonized as EN 60695-1-11.

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 60695-1-10	-	Fire hazard testing - Part 1-10: Guidance for assessing the fire hazard of electrotechnical products - General guidelines	EN 60695-1-10	-
IEC 60695-4	2012	Fire hazard testing - Part 4: Terminology concerning fire tests for electrotechnical products	EN 60695-4	2012
IEC 60695-8-1	-	Fire hazard testing - Part 8-1: Heat release - General guidance	EN 60695-8-1	-
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO/IEC Guide 51	-	Safety aspects - Guidelines for their inclusion in standards	-	-
ISO 13943	2008	Fire safety - Vocabulary	EN ISO 13943	2010

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BASIC SAFETY PUBLICATION
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Fire hazard testing –
Part 8-2: Heat release – Summary and relevance of test methods

Essais relatifs aux risques du feu –
Partie 8-2: Dégagement de chaleur – Résumé et pertinence des méthodes d'essais

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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 60695-8-2 has been prepared by IEC technical committee 89: Fire hazard testing.

This first edition cancels and replaces IEC TR 60695-8-2 published in 2008. This edition constitutes a technical revision.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
89/1343/FDIS	89/1349/RVD

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

This document 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.

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.

This International Standard is to be used in conjunction with IEC 60695-8-1.

IEC 60695-8 consists of the following parts:

- Part 8-1: Heat release – General guidance
- Part 8-2: Heat release – Summary and relevance of test methods

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

In the design of an 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, IEC 60695-1-11, and IEC 60695-1-12 provide guidance on how this is to be accomplished.

Fires involving electrotechnical products can also be initiated from external non-electrical sources. Considerations of this nature are dealt with in an overall fire hazard 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. The severity of a fire increases as the heat released increases, possibly leading to a flashover 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 foreseeable abnormal 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 that 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 other side effects of the fire (see the IEC 60695 series of standards).

FIRE HAZARD TESTING –

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

1 Scope

This part of IEC 60695-8 presents a summary of published test methods that are relevant to the determination of the heat released in fire tests on electrotechnical products or materials from which they are formed. It represents the current state of the art of the test methods and, where available, includes special observations on their relevance and use.

The list of test methods is not to be considered exhaustive, and test methods that were not developed by the IEC are not to be considered as endorsed by the IEC unless this is specifically stated.

Heat release data can be used as part of fire hazard assessment and in fire safety engineering, as discussed in IEC 60695-1-10, IEC 60695-1-11 [39] [1] and IEC 60695-1-12 [40].

This basic safety publication is primarily intended for use by technical Committees in the preparation of standards in accordance with the principles laid down in IEC Guide 104 and ISO/IEC Guide 51. It is not intended for use by manufacturers or certification bodies.

One of the responsibilities of a technical committee is, wherever applicable, to make use of basic safety publications in the preparation of its publications. The requirements, test methods or test conditions of this basic safety publication will not apply unless specifically referred to or included in the relevant publications.

2 Normative references

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.

IEC 60695-1-10, *Fire hazard testing – Part 1-10: Guidance for assessing the fire hazard of electrotechnical products – General guidelines*

IEC 60695-4:2012, *Fire hazard testing – Part 4: Terminology concerning fire tests for electrotechnical products*

IEC 60695-8-1, *Fire hazard testing – Part 8-1: Heat release – General guidance*

IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*

ISO/IEC Guide 51, *Safety aspects – Guidelines for their inclusion in standards*

ISO 13943:2008, *Fire safety – Vocabulary*

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1 Numbers in square brackets refer to the Bibliography.