SLOVENSKI STANDARD
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Preskušanje požarne ogroženosti - 8-1. del: Oddajanje toplote - Splošno navodilo (IEC 60695-8-1:2008)

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

Prüfungen zur Beurteilung der Brandgefahr - Teil 8-1: Wärmefreisetzung - Allgemeiner Leitfaden

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

Ta slovenski standard je istoveten z: **EN 60695-8-1:2008**

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 60695-8-1:2008 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60695-8-1

June 2008

ICS 13.220.40; 29.020

Supersedes EN 60695-8-1:2001

English version

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

(IEC 60695-8-1:2008)

Essais relatifs aux risques du feu - Partie 8-1: Dégagement de chaleur - Guide général (CEI 60695-8-1:2008)

Prüfungen zur Beurteilung der Brandgefahr - Teil 8-1: Wärmefreisetzung - Allgemeiner Leitfaden (IEC 60695-8-1:2008)

This European Standard was approved by CENELEC on 2008-05-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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 60695-8-1:2008 E

Foreword

The text of document 89/856/FDIS, future edition 2 of IEC 60695-8-1, prepared by IEC TC 89, Fire hazard testing, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60695-8-1 on 2008-05-01.

This European Standard supersedes EN 60695-8-1:2001.

The main changes with respect to EN 60695-8-1:2001 are listed below:

– editorial changes throughout;
– revised terms and definitions;
– new text concerning bomb calorimetry;
– revised Table 1a;
– new Clause 5 – Parameters used to report heat release data;
– introduction of intermediate scale fire test.

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

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) 2009-02-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-05-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60695-8-1:2008 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 60695-4	NOTE	Harmonized as EN 60695-4:2006 (not modified).
IEC 60836	NOTE	Harmonized as EN 60836:2005 (not modified).
IEC 61099	NOTE	Harmonized as EN 61099:1992 (not modified).
IEC 60867	NOTE	Harmonized as EN 60867:1994 (not modified).
IEC 60296	NOTE	Harmonized as EN 60296:2004 (not modified).

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

Publication	Year	Title	EN/HD	Year
-	-	Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item	EN 13823	- [1)]
IEC 60695	Series	Fire hazard testing	EN 60695	Series
IEC/TR 60695-8-2	- [1)]	Fire hazard testing - Part 8-2: Heat release - Summary and relevance of test methods	-	-
IEC Guide 104	1997	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO/IEC Guide 51	1999	Safety aspects - Guidelines for their inclusion in standards	-	-
ISO 1716	- [1)]	Reaction to fire tests for building products - Determination of the heat of combustion	EN ISO 1716	2002 [2)]
ISO 13943	2000	Fire safety - Vocabulary	EN ISO 13943	2000

[1)] Undated reference.

[2)] Valid edition at date of issue.

IEC 60695-8-1

Edition 2.0 2008-03

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

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COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIRE HAZARD TESTING –

Part 8-1: Heat release – General guidance

FOREWORD

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International Standard IEC 60695-8-1 has been prepared by IEC technical committee 89: Fire hazard testing.

This second edition cancels and replaces the first edition, published in 2001 and constitutes a technical revision.

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

– editorial changes throughout;
– revised terms and definitions;
– new text concerning bomb calorimetry;
– revised Table 1a;
– new Clause 5 – Parameters used to report heat release data;
– introduction of intermediate scale fire test.

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

FDIS	Report on voting
89/856/FDIS	89/863/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 60695-8-2.

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.

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.

Part 8 consists of the following parts:

Part 8-1: Heat release – General guidance

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

Part 8-3: Heat release – Heat release of insulating liquids used in electrotechnical products

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

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 to acceptable levels the potential risks of fire even in the event of foreseeable abnormal use, malfunction or failure. The future IEC 60695-1-10 [1][1)], together with its companion the future IEC 60695-1-11 [2] provide guidance on how this is to be accomplished.

The primary aims are as follows:

1) to prevent ignition caused by an electrically energized component part, and

2) in the event of ignition, to confine any resulting fire within the bounds of the enclosure of the electrotechnical product.

Secondary aims include the minimization of any flame spread beyond the product's enclosure and the minimization of harmful effects of fire effluents including heat, smoke and toxic or corrosive combustion products.

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

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 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, 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) Figures in square brackets refer to the bibliography.