ICS 13.220.40, 29.020 SLOVENSKÁ TECHNICKÁ NORMA Júl 2016

STN	**Skúšanie požiarneho nebezpečenstva. Časť 1-11: Návod na posudzovanie požiarneho nebezpečenstva elektrotechnických výrobkov. Hodnotenie požiarneho nebezpečenstva.**	**STN EN 60695-1-11** 34 5630

Fire hazard testing - Part 1-11: Guidance for assessing the fire hazard of electrotechnical products - Fire hazard assessment

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/16

Obsahuje: EN 60695-1-11:2015, IEC 60695-1-11:2014

Oznámením tejto normy sa od 12.11.2017 ruší
STN EN 60695-1-11 (34 5630) z júla 2011

122779

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60695-1-11

October 2015

ICS 29.020; 13.220.40

Supersedes EN 60695-1-11:2010

English Version

Fire hazard testing - Part 1-11: Guidance for assessing the fire hazard of electrotechnical products - Fire hazard assessment (IEC 60695-1-11:2014)

Essais relatifs aux risques du feu - Partie 1-11: Lignes directrices pour l'évaluation du danger du feu des produits électrotechniques - Evaluation du danger du feu (IEC 60695-1-11:2014)

Prüfungen zur Beurteilung der Brandgefahr - Teil 1-11: Anleitung zur Beurteilung der Brandgefahr von elektrotechnischen Erzeugnissen - Beurteilung der Brandgefahr (IEC 60695-1-11:2014)

This European Standard was approved by CENELEC on 2014-11-12. 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, 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

Ref. No. EN 60695-1-11:2015 E

European foreword

The text of document 89/1220/FDIS, future edition 2 of IEC 60695-1-11, prepared by IEC/TC 89 "Fire hazard testing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60695-1-11:2015.

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) 2016-05-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-11-12

This document supersedes EN 60695-1-11:2010.

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 60695-1-11:2014 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 60695-6-2	NOTE	Harmonized as EN 60695-6-2.
IEC 60695-7-1:2010	NOTE	Harmonized as EN 60695-7-1:2010 (not modified).
IEC 60695-7-2	NOTE	Harmonized as EN 60695-7-2.
IEC 60695-7-3:2011	NOTE	Harmonized as EN 60695-7-3:2011 (not modified).
IEC 60695-9-2	NOTE	Harmonized as EN 60695-9-2.
IEC 61386-21:2002	NOTE	Harmonized as EN 61386-21:2004 (not modified).

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	2009	Fire hazard testing - Part 1-10: Guidance for assessing the fire hazard of electrotechnical products - General guidelines	EN 60695-1-10	2010
IEC 60695-1-12	-	Fire hazard testing - Part 1-12: Guidance for assessing the fire hazard of electrotechnical products - Fire safety engineering	-	-
IEC 60695-4	2012	Fire hazard testing - Part 4: Terminology concerning fire tests for electrotechnical products	EN 60695-4	2012
IEC Guide 104	2010	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

IEC 60695-1-11

Edition 2.0 2014-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC SAFETY PUBLICATION
PUBLICATION FONDAMENTALE DE SÉCURITÉ

Fire hazard testing –
Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment

Essais relatifs aux risques du feu –
Partie 1-11: Lignes directrices pour l'évaluation du danger du feu des produits électrotechniques – Evaluation du danger du feu

IEC 60695-1-11:2014-10(en-fr)

IEC 60695-1-11

Edition 2.0 2014-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC SAFETY PUBLICATION
PUBLICATION FONDAMENTALE DE SÉCURITÉ

Fire hazard testing – Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment

Essais relatifs aux risques du feu – Partie 1-11: Lignes directrices pour l'évaluation du danger du feu des produits électrotechniques – Evaluation du danger du feu

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX X

ICS 13.220.40, 29.020

ISBN 978-2-8322-1862-4

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

FIRE HAZARD TESTING –

Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment

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.
2) The formal decisions or agreements of 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 IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60695-1-11 has been prepared by IEC technical committee 89: Fire hazard testing.

This second edition cancels and replaces the first edition of IEC 60695-1-11 published in 2010, and constitutes a technical revision.

The main changes with respect to the previous edition are:

a) Updated references;
b) Updated terms and definitions; and
c) Added Figure 5 – Description of range of products and circumstances of use; and
d) Updated Bibliography.

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

FDIS	Report on voting
89/1220/FDIS	89/1239/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 [10] [1].

This standard is to be used in conjunction with IEC 60695-1-10.

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 1 consists of the following parts:

Part 1-10: Guidance for assessing the fire hazard of electrotechnical products – General guidelines

Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment

Part 1-12: Guidance for assessing the fire hazard of electrotechnical products – Fire safety engineering[2]

Part 1-20: Guidance for assessing the fire hazard of electrotechnical products – Ignitability – General Guidance

Part 1-21: Guidance for assessing the fire hazard of electrotechnical products – Ignitability – Summary and relevance of test methods

Part 1-30: Guidance for assessing the fire hazard of electrotechnical products – Preselection testing process – General guidelines

Part 1-40: Guidance for assessing the fire hazard of electrotechnical products – Insulating liquids

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

---

1 Figures in square brackets refer to the Bibliography.

2 To be published.

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. This standard, together with its companion, IEC 60695-1-10, provides guidance on how this is to be accomplished.

The primary aims are 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.

Secondary aims include the minimisation of any flame spread beyond the product's enclosure and the minimisation 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 fire hazard assessment.

Fire hazard assessment is used to identify the kinds of fire events (fire scenarios) which will be associated with the product, to establish how the measurable fire properties of the product are related to the outcome of those events, and to establish test methods and performance requirements for those properties which will either result in a tolerable fire outcome or eliminate the event altogether.

Annex A demonstrates a relatively simple fire hazard assessment process as applied to the toxic hazard from a burning material.

Annex B demonstrates a more complex fire hazard assessment process as applied to an electrotechnical product, rigid plastic conduit.

Attention is drawn to the principles in IEC Guide 104, and to the role of committees with horizontal safety functions and group safety functions.

FIRE HAZARD TESTING –

Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment

1 Scope

This part of IEC 60695 provides guidance for assessing the fire hazard of electrotechnical products and for the resulting development of fire hazard testing as related directly to harm to people, animals or property.

It outlines a hazard-based process to identify appropriate fire test methods and performance criteria for products. The principles of the methodology are to identify fire events (fire scenarios) which will be associated with the product, to establish how the measurable fire properties of the product are related to the possible occurrence and outcome of those events, and to establish test methods and performance requirements for those properties which will either result in a tolerable fire outcome or eliminate the event altogether.

It is intended as guidance to IEC committees, to be used with respect to their individual applications. The actual implementation of this document remains the responsibility of each product committee, according to the minimum acceptable fire safety in its application field and taking into account the feedback from experience.

This basic safety publication is 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 [10].

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 60695-1-10:2009, *Fire hazard testing – Part 1-10: Guidance for assessing the fire hazard of electrotechnical products – General guidelines*

IEC 60695-1-12, *Fire hazard testing – Part 1-12 Guidance for assessing the fire hazard of electrotechnical products – Fire safety engineering*[3]

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

---

3 To be published.

IEC Guide 104:2010, *The preparation of safety publications and the use of basic safety publications and group safety publications*

ISO 13943:2008, *Fire safety – Vocabulary*