

TULEOHUKATSETUSED. OSA 10-3: ANOMAALNE
KUUMUS. PLASTVALUKUJU MOONUTUSE KATSE

Fire hazard testing - Part 10-3: Abnormal heat - Mould
stress relief distortion test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60695-10-3:2016 sisaldab Euroopa standardi EN 60695-10-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 60695-10-3:2016 consists of the English text of the European standard EN 60695-10-3:2016.
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English Version

Fire hazard testing - Part 10-3: Abnormal heat - Mould stress
relief distortion test
(IEC 60695-10-3:2016)

Essais relatifs aux risques du feu - Partie 10-3 : Chaleur
anormale - Essai de déformation par réduction des
contraintes de moulage
(IEC 60695-10-3:2016)

Prüfungen zur Beurteilung der Brandgefahr - Teil 10-3:
Unübliche Wärme - Prüfung auf Verformung durch Abbau
von Formspannungen
(IEC 60695-10-3:2016)

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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

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European foreword

The text of document 89/1328/FDIS, future edition 2 of IEC 60695-10-3, prepared by IEC/TC 89 "Fire hazard testing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60695-10-3:2016.

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) 2017-07-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-10-12

This document supersedes EN 60695-10-3:2002.

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 60695-10-3:2016 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.

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INTRODUCTION

In the design of any electrotechnical product, the risk of abnormal heat and the potential hazards associated with abnormal heat need to be considered. In this respect the objective of component, circuit, and product design, as well as the choice of materials, is to reduce to acceptable levels the potential risks during normal operating conditions, reasonable foreseeable abnormal use, malfunction and/or failure. The IEC has developed IEC 60695-1-10, together with its companion, IEC 60695-1-11, to provide guidance on how this is to be accomplished.

The primary aims of IEC 60695-1-10 [1]¹ and IEC 60695-1-11 [2] are to provide guidance on how:

- a) to prevent ignition caused by an electrically energized component part, and
- b) to confine any resulting fire within the bounds of the enclosure of the electrotechnical product in the event of ignition.

Secondary aims of IEC 60695-1-10 and IEC 60695-1-11 include the minimization of any flame spread beyond the product's enclosure and the minimization of the harmful effects of fire effluents such as heat, smoke, toxicity and/or corrosivity.

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

This part of IEC 60695 describes a test method that simulates the effects caused by relief of the residual process-induced stress, frozen in a moulded polymeric assembly of an end product, when the end product or a part of it is exposed to conditioning at the maximum allowable operating temperature. The test method is intended to be used to evaluate whether the product after conditioning continues to meet the requirements of the relevant product specification. It is not to be used to solely describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual abnormal conditions. However, results of this test may be used as elements of a fire hazard assessment which takes into account all of the factors pertinent to a particular end use.

This part of IEC 60695 may involve hazardous materials, operations, and equipment. It does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

¹ Numbers in square brackets refer to the bibliography.

FIRE HAZARD TESTING –

Part 10-3: Abnormal heat – Mould stress relief distortion test

1 Scope

This part of IEC 60695 specifies a mould stress relief distortion test. It is applicable to electrotechnical equipment including parts made from polymeric materials.

This test method is intended to evaluate the effects caused by relief of the residual process-induced stress, set in a moulded polymeric assembly of an end product. This stress relief occurs when the sample (energized or not), is exposed to conditioning at a defined temperature for a defined period of time. The test specimen is considered to have satisfactorily withstood the test if, after conditioning to room temperature, it meets defined test criteria.

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 are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at: <http://www.electropedia.org>)

IEC 60216-4-1, *Electrical insulating materials – Thermal endurance properties – Part 4-1: Ageing ovens – Single-chamber ovens*

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

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 inclusion in standards*

ISO 13943:2008, *Fire safety – Vocabulary*