

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC SAFETY PUBLICATION

PUBLICATION FONDAMENTALE DE SÉCURITÉ

Fire hazard testing –

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

Essais relatifs aux risques du feu –

**Partie 1-30: Lignes directrices pour l'évaluation des risques du feu des produits
électrotechniques – Processus d'essais de présélection – Lignes directrices
générales**



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CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	7
4 Principles of product design considering preselection	7
5 Advantages and limitations of preselection	8
6 Aspects of preselection relative to fire hazard assessment	9
Annex A (informative) Examples of test methods	10
A.1 General.....	10
A.2 Ignitability	10
A.3 Flammability and flame spread.....	10
A.4 Heat.....	11
A.5 Smoke	11
A.6 Toxicity	11
A.7 Corrosion	11
A.8 Abnormal heat	11
A.9 Tracking index	11
Annex B (informative) Use of preselection tests for flammability requirements for materials used in attended electric appliances – Illustrative example	12
Bibliography.....	14
Figure B.1 – Selection and sequence of tests for resistance to fire in attended appliances in accordance with Figure O.3 of IEC 60335-1 [1].....	13
Table 1 – Some factors which can affect fire performance in preselection tests	8

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIRE HAZARD TESTING –

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

FOREWORD

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International Standard IEC 60695-1-30 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) Reference to IEC 60695-1-12;
- b) Modified Introduction;
- c) Clause 2: updated and additional normative references;
- d) Clause 3: updated and additional terms and definitions;

- e) Clause 4: updated text, with a requirement and normative reference to IEC 60695-1-10, IEC 60695-1-11 and IEC 60695-1-12;
- f) Clause 5: modified text;
- g) Annex A: updated references with additions and deletions;
- h) Annex B: Examples of materials used in attended appliances replaces the previous example of an ITE product;
- i) Bibliographic references updated.

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

FDIS	Report on voting
89/1350/FDIS	89/1355/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 Directive, 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 60695-1-10 and IEC 60695-1-11.

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*
- 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 document will remain unchanged until the validity 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 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, IEC 60695-1-11 and IEC 60695-1-12 provide guidance on how this is to be accomplished.

The best method for testing electrotechnical products with regard to fire hazard is to duplicate exactly the conditions occurring in practice within a real-scale fire test. Where this is not practicable, fire hazard testing is conducted by simulating as closely as possible, the actual conditions of use and of the situation to which a sub-assembly, component, part or material may be exposed in such use.

Preselection is the procedure for assessing and choosing materials, components or sub-assemblies for parts of end products. Preselection has been used for many years to assist in the design stage of the end product.

The information gained from properly designed small-scale tests can be used as an aid for the preselection of appropriate materials, parts, components or sub-assemblies with regard to the fire hazard evaluation of the final end product. As an outcome of conducting a fire hazard assessment, an appropriate series of preselection flammability and ignition tests may enable reduced end product testing.

FIRE HAZARD TESTING –

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

1 Scope

This part of IEC 60695 provides guidance for assessing and choosing candidate materials, components or sub-assemblies for making an end product based upon preselection testing.

It describes how preselection provides comparative fire hazard test methods to evaluate the performance of a test specimen and how preselection can be used in the selection of materials, parts, components and sub-assemblies during the design stage of an end product. It further describes how standardized test methods may be used as one part in the decision making processes directed to minimize the fire hazards from electrotechnical equipment. It takes into account the desired reaction to fire properties of the end product and the possible effects of environmental conditions on the behaviour of the end product.

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.

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

IEC 60695-1-11, *Fire hazard testing – Part 1-11: Guidance for assessing the fire hazard of electrotechnical products – Fire hazard assessment*

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*

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*