

Fire hazard testing —

Part 2-20: Glowing/hot wire based test methods — Hot-wire coil ignitability — Apparatus, test method and guidance

ICS 13.220.40; 29.020

National foreword

This Draft for Development reproduces verbatim IEC TS 60695-2-20:2004. It supersedes BS IEC 60695-2-20:1995 which is withdrawn.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature because the subject matter is still under technical development. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the international organization responsible for the Technical Specification. A review of this publication will be initiated not later than 3 years after its publication by the international organization so that a decision can be taken on its status at the end of its 3-year life. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into an international standard, to extend the life of the Technical Specification for another 3 years or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee GEL/89, Fire Hazard Testing, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the BSI Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

Summary of pages

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Allumabilité par bobine de fil chauffant –
Appareillage, méthode d'essai et lignes directrices**

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Part 2-20:

**Glowing/hot wire based test methods –
Hot-wire coil ignitability –
Apparatus, test method and guidance**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Hot-wire coil ignitability –
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FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- The subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 60695-2-20, which is a technical specification, has been prepared by IEC technical committee 89: Fire hazard testing.

This second edition cancels and replaces the first edition published in 1995, and constitutes a technical revision.

The status of this publication has been reassigned from an International Standard to a Technical Specification, however, the structure and layout remains essentially the same. Every technical aspect of this test method has been reviewed in an attempt to improve both the repeatability and reproducibility. Annex A has been added for the determination of the test current I_c . Annex B has been added which introduces the concept of a Performance Level Category (PLC).

It has the status of a basic safety publication in accordance with IEC Guide 104.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
89/594/DTS	89/626/RVC

Full information on the voting for the approval of this technical specification 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.

The committee has decided that the contents of this publication will remain unchanged until 2009. At this date, the publication will be

- transformed into an International Standard;
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

IEC 60695-2, under the general heading *Fire hazard testing – Part 2: Glowing/hot-wire based test methods*, consists of the following parts:

Part 2-10: Glow-wire apparatus and common test procedure

Part 2-11: Glow-wire flammability test method for end-products

Part 2-12: Glow-wire flammability test method for materials

Part 2-13: Glow-wire ignitability test method for materials

Part 2-20: Hot-wire coil ignitability: Apparatus, test method and guidance

FIRE HAZARD TESTING –

Part 2-20: Glowing/hot wire based test methods – Hot-wire coil ignitability – Apparatus, test method and guidance

1 Scope

This technical specification is applicable to solid electrical insulating materials. It is intended to measure the time required to ignite the test specimen during the application of heat from an electrically heated coil as an ignition source.

This test method is not valid for determining the ignition behaviour of complete items of equipment, since the dimensions of the insulating systems or combustible parts, the design and heat transfer to adjacent metallic or non-metallic parts, etc. greatly influence the ignitability of the electrical insulating materials used therein. In addition, it is not valid for determining fire behaviour and fire hazard of equipment.

The data may be used for the preselection of a material as described in IEC 60695-1-30.

The optional Performance Level Category (PLC) system described in Annex B is intended for the preselection of component materials for products.

An alternative test for ignitability is IEC 60695-2-13. However, no correlation has been established between IEC 60695-2-20 and IEC 60695-2-13.

One of the responsibilities of a technical committee is, wherever applicable, to make use of basic safety publications in the preparation of its publications.

2 Normative references

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.

IEC 60695-1-30:2002, *Fire hazard testing – Part 1-30: Guidance for assessing the fire hazard of electrotechnical products – Use of preselection testing procedures*

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

ISO/IEC 13943:2000, *Fire safety – Vocabulary*

ISO 291:1997, *Plastics – Standard atmospheres for conditioning and testing*

ISO 293:1986, *Plastics – Compression moulding test specimens of thermoplastic materials*

ISO 294 (all parts), *Plastics – Injection moulding of test specimens of thermoplastic materials*

ISO 295:1991, *Plastics – Compression moulding of test specimens of thermosetting materials*