

ICS 13.220.40, 29.020
CCS k04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 5169.34-2023

**Fire hazard testing for electric and electronic products - Part 34:
Guidance for assessing the fire hazard - Ignitability - Summary
and relevance of test methods**

电工电子产品着火危险试验 第34部分：着火危险评定导则 起燃性 试验方法概要
和相关性

Issued on: September 7, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document is Part 34 of "Fire Hazard Test of Electrical and Electronic Products". "Fire Hazard Test of Electrical and Electronic Products" has been released See Appendix NA for some. This document replaces GB /Z 5169.34-2014 "Fire Hazard Test of Electrical and Electronic Products - Part

34. Guidelines for Fire Hazard Assessment" "Overview and Relevance of Ignition Test Methods", compared with GB /Z 5169.34-2014, in addition to structural adjustments and editorial changes, the main technical The technical changes are as follows:

- a) The standard attribute is changed from a guidance document to a recommended standard;
- b) Added instructions on the withdrawal of IEC 60695-2-20 (see 4.5.2);
- c) Added a description of the tracking index test in ASTM D3638 for comparison with IEC 60112 (see 4.7.1 and Table 1). This document is equivalent to IEC 60695-1-21.2016 "Fire Hazard Test Part 1-

21. Guidelines for Assessment of Fire Hazard of Electrical Products Summary and Relevance of Ignition Test Methods". This document has made the following minimal

editorial changes.

---In order to be consistent with the existing standard series, the name of this document is changed to "Fire Hazard Test of Electrical and Electronic Products - Part

34.Fire Hazard Summary and Relevance of Ignition Test Methods in Risk Assessment Guidelines;

--- Move some of the informative citations in the normative citations in Chapter 2 to the references;

---Added informative appendix NA to list the published parts of the "Fire Hazard Test of Electrical and Electronic Products". Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the China Electrical Equipment Industry Association. This document is under the jurisdiction of the National Standardization Technical Committee for Fire Hazard Testing of Electrical and Electronic Products (SAC/TC300). This document was drafted by: China Electrical Equipment Research Institute Co., Ltd., Shenzhen Customs Industrial Product Inspection Technology Center, China Institute of Technology (Beijing) Beijing) Testing and Certification Co., Ltd., Shandong Product Quality Inspection Research Institute, Weikai Testing Technology Co., Ltd., Guangdong Midea Refrigeration Equipment Co., Ltd. Division, Beijing Tai Ruite Testing Technology Service Co., Ltd., Shenzhen Institute of Metrology and Quality Inspection, Zhejiang Yuehua Telecommunications Co., Ltd., China Household Appliances Research Institute, Fifth Research Institute of Electronics of the Ministry of Industry and Information Technology, State Grid Sichuan Electric Power Company Electric Power Research Institute, Tianjin Jinhangji Institute of Computing Technology. The main drafters of this document. Liu Xiuzhen, Zhao Xingfang, Wan Cheng, Zhang Jing, Liu Xin, Zhang Hanping, Liu Yan, Gao Lingsong, Zhuang Hui, Wang Sheng, Peng Qiang, Zhang Yuanqin, Zhang Chenmeng, Zhang Tuqiang. The previous versions of this document and the documents it replaces are as follows:

---First released in.2014 as GB /Z 5169.34-2014;

---This is the first revision.

1 Scope

GB/T 5169.34-2023 is the part of the fire hazard series that explains how the other parts relate to each other. Ignitability is measured by a family of tests - the glow-wire, the needle flame, the various bad-connection and hot-wire methods - and each applies a different ignition source in a different way, because each was devised to represent a different real failure: an overheating component, a small internal flame, a poor connection heating up over time. A designer or a certifier confronted with the set has to choose, and choosing wrongly means testing for a scenario the product will never face while missing the one it

will. This part gives an overview of the test methods for determining the ignition properties of electrical and electronic products and their materials, including those that treat ignitability as a quantitative indicator, and sets out how the methods relate to one another and where each is relevant. Under ICS 13.220.40 and 29.020 with CCS K04, it is written for product safety engineers, for the testing laboratories running these programmes, and for the certification bodies deciding which tests a product needs. It is the companion to the flame-source parts such as GB/T 5169.15.

This document provides an overview of test methods for determining the ignition properties of electrical and electronic products and their materials, including taking ignition properties as important quantitative indicators test methods. This document presents test methods that represent the current state of the art and, where appropriate, the relevance and use of these test methods. Special instructions were given. This document is applicable to the assessment of the ignitability of electrical and electronic products and the materials used in them and their correlation with fire hazards. This document is intended to be used by technical committees when preparing standards based on the principles set out in IEC Guide104 and ISO /IEC Guide51 use. One of the tasks of the technical committee is to use this series of standards wherever applicable when writing standards in this field. unless relevant Standards are specifically mentioned or listed, otherwise the requirements, test methods or test conditions of this document will not apply.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 5169.1-2015 Fire hazard test for electrical and electronic products Part

3 Terms and definitions

The following terms and definitions as defined in ISO 13943.2017 and GB/T 5169.1-2015 apply to this document.

3.1 burning combustion The exothermic reaction of a substance with an oxidizing agent.

Note. Combustion usually emits a combustion stream, accompanied by flame (3.10) and/or glowing heat. [Source: ISO 13943.2017,3.55]

3.2 Finished productendproduct Products that can be used without modification.

Note. A finished product can be a component of another finished product. [Source: GB/T 5169.1-2015,3.2.7]

3.3 fire fire (Usually) A combustion (3.1) process characterized by exhaust heat and combustion flow, often accompanied by smoke, flame (3.10), glowing heat, or a combination thereof.

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