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

GB/T 5169.2-2021

**Fire hazard testing for electric and electronic products - Part 2:
Guidance for assessing the fire hazard - General guidelines**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" Drafting.

This document is Part 2 of GB/T 5169 "Fire Hazard Test for Electrical and Electronic Products". GB/T 5169 has released the following part.

---Part 1. Terminology of fire test;

---Part 2. General rules for fire hazard assessment guidelines;

- Part 5. Test flame needle flame test method device, confirmation test method and guidance;
- Part 9. Guidelines for fire hazard assessment, general rules for preselected test procedures;
- Part 10. Glow wire/hot wire basic test method Glow wire device and general test method;
- Part 11. Glow wire/hot wire basic test method Glow wire flammability test method of finished product (GWEPT);
- Part 12. Glow-wire/hot-wire basic test method. Glow-wire flammability index (GWFI) test method for materials;
- Part 13. Glow wire/hot wire basic test method Glow wire ignition temperature (GWIT) test method of materials;
- Part 14. Test flame 1kW nominal pre-mixed flame device, confirmation test method and guide;
- Part 15. Test flame 500W flame device and confirmation test method;
- Part 16. Test flame 50W horizontal and vertical flame test method;
- Part 17. Test flame 500W flame test method;
- Part 18. General rules for the toxicity of combustion streams;
- Part 19. Abnormal hot mold compression stress release deformation test;
- Part 20. Summary and correlation of flame surface spread test methods;
- Part 21. Abnormal hot ball pressure test method;
- Part 22. Test flame 50W flame device and confirmation test method;
- Part 23. Test flame 500W vertical flame test method for tubular polymeric materials;
- Part 24. Guidelines for the Assessment of Fire Hazards, Insulating Liquids;
- Part 25. General Rules for Smoke Blur;
- Part 26. Summary and relevance of smoke fuzzy test methods;
- Part 29. General rules for heat release;
- Part 30. Summary and relevance of heat release test methods;
- Part 31. General rules for flame surface spread;
- Part 32. Heat release of heat release of insulating liquid;
- Part 33. Guideline for Fire Hazard Assessment, General Principles of Ignition;

---Part 34.Guidelines for Fire Hazard Assessment Guidelines for ignitability test methods and correlation;

---Part 35.General rules for the corrosion hazards of combustion streams;

---Part 36.Summary and correlation of the corrosion hazard test methods of combustion flow;

---Part 38.Summary and relevance of the toxicity test method of the combustion stream;

---Part 39.Use and explanation of the results of the toxicity test of the combustion stream;

---Part 40.Toxicity evaluation device and test method of combustion stream;

---Part 41.Calculation and explanation of the results of the toxicity evaluation test of the combustion stream;

---Part 42.Test guidelines for test flame confirmation;

---Part 44.Guidelines for Fire Hazard Assessment, Fire Hazard Assessment;

---Part 45.Fire hazard assessment guidelines for fire safety engineering;

--- Part 46.Determination of the characteristic heat flux during ignition of the non-contact flame source of the test flame.

This document replaces GB/T 5169.2-2013 "Fire Hazard Test for Electrical and Electronic Products Part 2.General Guidelines for Fire Hazard Assessment

Rules", compared with GB/T 5169.2-2013, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the.2013 edition);
- b) The normative references have been changed (see Chapter 2, Chapter 2 of the.2013 edition);
- c) Changed terms and definitions (see Chapter 3, Chapter 3 of the.2013 edition);
- d) Change the expressions cited in Table 1 and Appendix B (see Chapter 4, Chapter 4 of the.2013 edition);
- e) Added content about reducing fire risk (see 5.2.2.2);
- f) Changed Table 1 (see Table 1,.2013 version of Table 1);
- g) Table 2 (see Table 2) describing the characteristics of fire at various stages has been added;
- h) The note in 5.4 has been deleted, and the normative reference to IEC 60695-1-12 has been added (see 5.4, 5.4 in the.2013 edition);
- i) The content of the note in 6.2.1 is changed to the main text (see 6.2.1, 6.2.1 of the.2013

edition);

j) The statement "The selected test method should be related to the fire situation concerned" has been added, and the willing verbs expressed in the clauses have been changed (see Article

Chapter 8, Chapter 8 of the.2013 edition);

k) The content of Chapter 9 and Appendix A have been added, giving some common electrical and non-electric ignition sources (see Chapter 9 and Appendix A);

l) Appendix A was changed to Appendix B, and modified, and the guiding publications and tests formulated by IEC /TC89 in the.2013 edition were deleted

"Leakage current and/or metal loss test method" in the subject of method corrosiveness, "Small-scale static test-instrument" in the subject of smoke

"Apparatus", "Small-scale Static Test-Test and Material", "Toxicity-Apparatus", "Toxicity-Calculation of Test Results" in the topic of toxicity

"Calculation and Explanation", the "Insulating Liquid-Test Method" publication in the theme of heat release, and a new "Insulation Liquid-Test Method" in the theme of fire hazard testing.

Fire Hazard Test-Fire Safety Engineering" publication (see Appendix B, Appendix A of the.2013 edition).

The translation method used in this document is equivalent to IEC 60695-1-10.2016 "Fire Hazard Test Part 1-10.Fire of Electrical Products"

General Principles of Risk Assessment Guidelines.

The Chinese documents that have consistent correspondence with the normatively cited international documents in this document are as follows.

---GB 3836.1-2010 Explosive atmosphere Part 1.General requirements for equipment (IEC 60079-0.2007, MOD);

---GB/T 5169.9-2021 Fire hazard test for electric and electronic products Part 9.Pre-selection test for guidelines for fire hazard assessment

General rules of inspection procedures (IEC 60695-1-30.2017, IDT);

---GB/T 5169.44-2013 Fire hazard test of electric and electronic products Part 44.Fire hazard assessment guidelines

Risk assessment (IEC 60695-1-11.2010, IDT);

---GB/T 5169.45-2019 Fire hazard test of electrical and electronic products Part 45.Fire hazard assessment guidelines