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

GB/T 5169.46-2020

**Fire hazard testing for electric and electronic products - Part 46:
Test flames - Determination of the characteristic heat flux for
ignition from a non-contacting flame source**

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Foreword

GB/T 5169 "Fire Hazard Test for Electrical and Electronic Products" consists of the following parts:

---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 thermal 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 Fire Hazard Assessment Insulating Liquids;
- Part 25: General Rules for Smoke Blur;
- Part 26: Summary and correlation of smoke fuzzy test methods;
- Part 29: General rules for heat release;
- Part 30: Summary and correlation 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 Ignitability;

- Part 34: Guidelines for Fire Hazard Assessment Guidelines for ignitability test methods and correlation;
- Part 35: General rules for corrosion hazards of combustion streams;
- Part 36: Summary and correlation of the corrosion hazard test methods of combustion flow;
- Part 38: Summary and correlation of the toxicity test methods of combustion streams;
- 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 confirmation of test flames;
- Part 44: Guidelines for Fire Hazard Assessment, Fire Hazard Assessment;
- Part 45: Fire hazard assessment guidelines for fire safety engineering;
- Part 46: Determination of characteristic heat flux during ignition in a non-contact flame source of the test flame:

This part is Part 46 of GB/T 5169:

This section was drafted in accordance with the rules given in GB/T 1:1-2009:

The translation method used in this part is equivalent to the IEC TS60695-11-11:2016 "Fire Hazard Test Part 11-11: Test Flame

Determination of characteristic heat flux during ignition in a non-contact flame source":

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows:

---GB/T 5169:22-2015 Fire hazard test of electric and electronic products Part 22: Test flame 50W flame equipment

Set and confirm test method (IEC 60695-11-4:2011, IDT)

---GB/T 2918-2018 Standard environment for condition adjustment and testing of plastic specimens (ISO 291:2008, MOD)

---GB/T 9352-2008 Compression molding of plastic thermoplastic material samples (ISO 293:2004, IDT)

---GB/T 17037 (all parts) Preparation of plastic thermoplastic materials injection moulded samples [ISO 294 (all parts)]

---GB/T 5471-2008 Compression molding of plastic thermosetting plastic samples (ISO

295:2004, IDT)

---GB/T 16499-2017 Compilation of electrical and electronic safety publications and basic safety publications and multi-disciplinary shared safety publications

Guidelines for the application of objects (IEC Guide104:2010, NEQ)

---GB/T 20002:4-2015 Drafting of specific content in the standard Part 4: Safety related content in the standard (ISO /

IEC Guide51:2014,MOD)

This section has made the following editorial changes:

---In order to be consistent with the existing standard series, the name of this part is changed to "Fire Hazard Test of Electrical and Electronic Products Part 46: Test Fire Determination of characteristic heat flux during ignition in a non-contact flame source:"

This part was proposed by China Electrical Equipment Industry Association:

This part is under the jurisdiction of the National Standardization Technical Committee for Fire Hazard Testing of Electrical and Electronic Products (SAC/TC300):

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Introduction

The design of all electrical and electronic products needs to consider fire risk and potential fire hazards: Component, circuit and equipment design and materials

The purpose of material screening in this regard is to reduce the potential risk of fire accidents to an acceptable level, even if foreseeable abnormal use occurs:

The same is true for conditions such as use, failure and failure: IEC 60695-1-10 and IEC