



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

GB/T 5169.10-2017

**Fire hazard testing for electric and electronic products -- Part
10: Glowing/hot-wire based test methods -- Glow-wire
apparatus and common test procedure**

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Foreword

GB/T 5169 Fire Hazard Testing for Electric and Electronic Products has published or plans to

publish the following parts.

- Part 1. Terminology Concerning Fire Tests;
- Part 2. Guidance for Assessing the Fire Hazard - General Guidelines;
- Part 5. Test Flame Needle Flame Test Method Apparatus - Confirmation Test Method

and Guidance;

--- Part 9.Guidance for Assessing the Fire Hazard - Pre-Selection Testing Procedures -

General Guidelines;

--- Part 10.Glow/Hot-Wire Based Test Methods - Glow-Wire Apparatus and Common Test Procedure;

--- Part 11.Glowing/Hot-Wire Based Test Methods - Glow-Wire Flammability Test Method for End-Products;

--- Part 12.Glowing/Hot-Wire Based Test Methods - Glow-Wire Flammability Index (GWFI) Test Method for Materials;

--- Part 13.Basic Test Methods for Glowing Filament/Hot-Wire - Test Methods for Glow Wire Ignition Temperature (GWIT);

--- Part 14.Test Flames - 1kW Nominal Pre-Mixed Flame - Apparatus, Confirmatory Test Arrangement and Guidance;

--- Part 15.Test Flames - 500W Flames - Apparatus and Confirmation Test Methods;

--- Part 16.Test Flames - 50W Horizontal and Vertical Flame Test Methods;

--- Part 17.Test Flames - 500W Flame Test Method;

--- Part 18.Toxicity of Fire Effluent - General Guidance;

--- Part 19.Abnormal Heat - Mould Stress Relief Distortion Test;

--- Part 20.Surface Spread of Flame - Summary and Relevance of Test Methods;

--- Part 21.Abnormal Heat -Ball Pressure Test;

--- Part 22.Test Flames - 50W Flame - Apparatus and Confirmational Test Method;

--- Part 23.Test Flames - 500W Vertical Flame Test Method for Tubular Polymeric Materials;

--- Part 24.Guidance for Assessing the Fire Hazard - Insulating Liquids;

--- Part 25.Smoke Obscuration - General Guidance;

--- Part 26.Smoke Obscuration - Summary and Relevance of Test Methods;

--- Part 27.Smoke Obscuration - Small-Scale Static Test - Description of the Apparatus;

--- Part 28.Smoke Obscuration - Small-Scale Static Test - Materials;

--- Part 29.Heat Release - General Guidance;

- Part 30.Heat Release - Summary and Relevance of Test Methods;
- Part 31.Surface Spread of Flame - General Guidance;
- Part 32.Heat Release - Heat Release of Insulating Liquid;
- Part 33.Guidance for Assessing the Fire Hazard - Ignitability - General Guidance;
- Part 34.Guidance for Assessing the Fire Hazard - Ignitability - Summary and Relevance of Test Methods;
- Part 35.Corrosion Damage Effects of Fire Effluent - General Guidance;
- Part 36.Corrosion Damage Effects of Fire Effluent - Summary and Relevance of Test Methods;
- Part 38.Toxicity of Fire Effluent - Summary and Relevance of Test Methods;
- Part 39.Toxicity of Fire Effluent - Use and Interpretation of Test Results;
- Part 40.Toxicity of Fire Effluent - Estimation of Toxic Potency - Apparatus and Test Method;
- Part 41.Toxicity of Fire Effluent - Estimation of Toxic Potency - Calculation and Interpretation of Test Results;
- Part 42.Test Flames - Confirmatory Tests - Guidance;
- Part 44.Guidance for Assessing the Fire Hazard - Fire Hazard Assessment.

This Part is Part 10 of GB/T 5169.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part replaced GB/T 5169.10-2006 Fire Hazard Testing for Electric and Electronic Products - Part 10.Glow/Hot-Wire Based Test Methods - Glow-Wire Apparatus and Common

Test Procedure. Compared with GB/T 5169.10-2006, the major technical changes of this Part

are as follows.

- Move the content of "Summary of Test Equipment and General Test Methods" to the Scope (see Clause 1 of this Edition; Clause 4 of 2006 Edition);
- Add some terms and definitions (see Clause 3 of this Edition);
- Add provisions for new glow wire annealing treatment (see 4.1 of this Edition; 5.1 of

2006 Edition);

- Revise the description of the provisions of the test chamber (see 4.5 of this Edition; 5.4 of 2006 Edition);
- Increase requirements for timing devices (see 4.6 of this Edition);
- Revise the standard for replacing the glow wire; CHANGE FROM when the Dimension-A "reduces to 90% of the initial reading", it shall be replaced TO. when it "reduces to 97.5% of the reading before the initial test" (see 5.1 of this Edition; 6.1 of 2006 Edition);
- Add Annex A "Equipment Manufacturers and Suppliers " (see Annex A of this Edition);
- Add Annex B "Guidance on 'Ignition' and 'Flaming' Observations" (see Annex B of this Edition);
- Add Annex C "Guidance on the Verification Procedure of the Glow-Wire Temperature Measuring System by the Heating Current" (see Annex C of this Edition).

This Part used translation method to equivalently adopt IEC 60695-2-10.2013 Fire Hazard Testing - Part 2-10.Glowing/Hot-Wire Based Test Methods - Glow-Wire Apparatus and Common Test Procedure.

The Chinese documents that have a consistent correspondence with the international documents

normatively cited in this part are as follows.

- GB/T 5169.11-2017 Fire Hazard Testing for Electric and Electronic Products - Part 11. Glowing/Hot-Wire Based Test Methods - Glow-Wire Flammability Test Method for End-Products (GWEPT) (IEC 60695-2-11.2014, IDT);
- GB/T 5169.12-2013 Fire Hazard Testing for Electric and Electronic Products - Part 12. Glowing/Hot-Wire Based Test Methods - Glow-Wire Flammability Index (GWFI) Test Method for Materials (IEC 60695-2-12.2010, IDT);
- GB/T 5169.13-2013 Fire Hazard Testing for Electric and Electronic Products - Part 13. Basic Test Methods for Glowing Filament/Hot Wire - Test Methods for Glow Wire Ignition Temperature (GWIT) (IEC 60695-2-13.2010, IDT);
- GB/T 16839.1-1997 Thermocouples - Part 1.Reference Tables (idt IEC 60584-1.1995);