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

GB/T 11026.1-2016

**Electrical insulating materials -- Thermal endurance properties
-- Part 1: Ageing procedures and evaluation of test results
(English Translation)**

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Foreword

GB/T 11026 Electrical insulating materials - Thermal endurance properties consists of the following parts.

- Part 1.Ageing procedures and evaluation of test results;
- Part 2.Choice of test criteria;
- Part 3.Instructions for calculating thermal endurance characteristics;
- Part 4.Ageing ovens - Single-chamber ovens;
- Part 5.Ageing ovens - Precision ovens for use up to 300 °C;
- Part 6.Ageing ovens - Multi-chamber ovens;
- Part 7.Determination of relative thermal endurance index (RTE) of insulating material;
- Part 8.Determination of thermal endurance indices (TI and RTE) of an insulating material using the fixed time frame method;
- Part 9.Instructions for calculating thermal endurance characteristics using simplified procedures.

This Part is Part 1 of GB/T 11026.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 11026.1-2003 Electrical insulating materials - Properties of thermal endurance - Part 1.Ageing procedures and evaluation of test results. As compared with GB/T 11026.1-2003, the main technical changes are as follows.

-- DELETE all references in the Normative references, and ADD six references including GB/T 21223.1-2015, IEC 60212, IEC 60216-2, IEC 60216-3.2006, IEC 60216-4 (all parts) and IEC 60216-8 (see Clause 2; Clause 2 of the 2003 edition);

-- ADD the term "end point" (see 3.1.20);

-- DELETE "the 'Articles' column and the 'TEP' symbol in Sub-clause 3.2" (see

3.2 of the 2003 edition);

-- DELETE "4.2 Simplified numerical and graphical evaluation procedures" (see 4.2 of the 2003 edition);

-- DELETE "7 Simplified procedures" (see Clause 7 of the 2003 edition);

-- ADD "Bibliography".

This Part is identical to IEC 60216-1.2013 Electrical insulating materials - Thermal endurance properties - Part 1.Ageing procedures and evaluation of test results (sixth edition) by using the translation method.

The documents of our country that have a consistent correspondence with the international documents that are referenced in this Part are as follows.

-- GB/T 10580-2015 Standard conditions for use prior to and during the testing of solid electrical insulating materials (IEC 60212.2010, IDT);

-- GB/T 11026.2-2012 Electrical insulating materials - Thermal endurance properties - Part 2.Choice of test criteria (IEC 60216-2.2005, IDT);

-- GB/T 11026.3-2006 Electrical insulating materials - Thermal endurance properties - Part 3.Instructions for calculating thermal endurance characteristics (IEC 60216-3.2002, IDT);

-- GB/T 11026.4-2012 Electrical insulating materials - Thermal endurance

properties - Part 4.Ageing ovens - Single-chamber ovens (IEC 60216-4-1.2006, IDT);

-- GB/T 11026.5-2010 Electrical insulating materials - Thermal endurance properties - Part 5.Ageing ovens - Precision ovens for use up to 300 °C (IEC 60216-4-2.2000, IDT);

-- GB/T 11026.6-2010 Electrical insulating materials - Thermal endurance properties - Part 6.Ageing ovens - Multi-chamber ovens (IEC 60216-4-3.2000, IDT);

-- GB/T 11026.9-2016 Electrical insulating materials - Thermal endurance properties - Part 9.Instructions for calculating thermal endurance characteristics using simplified procedures (IEC 60216-8.2013, IDT).

This Part was proposed by China Electrical Equipment Industry Association.

This Part shall be under the jurisdiction of National Technical Committee 301 on Evaluation and Qualification of Electrical Insulating Material and Systems of Standardization Administration of China (SAC/TC 301).

Drafting organizations of this Part. Guilin Electrical Equipment Scientific Research Institute Co., Ltd., Machinery Industry Beijing Institute of Electrical Technology and Economics, Shanghai Electric Cable Research Institute, DuPont (China) Research and Development Management Co., Ltd., Jiaying New World Electromechanical Co., Ltd., 3M China Limited.

Electrical insulating materials - Thermal endurance

properties - Part 1.Ageing procedures and evaluation of test results

1 Scope

This Part of GB/T 11026 specifies the general ageing conditions and procedures to be used for deriving thermal endurance characteristics and gives guidance in using the detailed instructions and guidelines in the other parts of GB/T 11026.

Note 1: Although originally developed for use with electrical insulating materials and

simple combinations of such materials, the procedures are considered to be of more general applicability and are widely used in the assessment of materials not intended for use as electrical insulation.

Note 2: In the application of this Part, it is assumed that a practically linear relationship exists between the logarithm of the time required to cause the predetermined property change and the reciprocal of the corresponding absolute temperature (Arrhenius relationship).

Note 3: For the valid application of the Part, no transition, in particular no first-order transition shall occur in the temperature range under study.

Note 4: Throughout the rest of GB/T 11026 the term "insulating materials" is always taken to mean "insulating materials and simple combinations of such materials".

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 21223.1-2015 Guide for the statistical analysis of ageing test data - Part

1 Methods based on mean values of normally distributed test results (IEC

60493-1:2011, IDT)

IEC 60212, Standard conditions for use prior to and during the testing of solid electrical insulating materials

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