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

GB/T 31838.4-2019

**Solid insulating materials -- Dielectric and resistive properties --
Part 4: Resistive properties (DC methods) -- Insulation
resistance**

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Foreword

GB/T 31838 "Dielectric and Electrical Properties of Solid Insulation Materials" currently publishes the following sections.

--- Part 1. General;

--- Part 2. Resistance characteristics (DC method) Volume resistance and volume resistivity;

---Part 3. Resistance characteristics (DC method) Surface resistance and surface resistivity;

--- Part 4. Resistance characteristics (DC method) Insulation resistance.

This part is the fourth part of GB/T 31838.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 10064-2006 "Test Method for Measuring Insulation Resistance of Solid Insulation Materials", and GB/T 10064-2006

Compared to the main technical changes are as follows.

--- Revised the normative reference document (see Chapter 2, Chapter 2 of the.2006 edition);

--- Added "electrode device" "conical pin electrode" "strip electrode" "measuring resistance" "insulation resistance between conical pin electrodes"

And the term "insulation resistance between strip electrodes" (see 3.1~3.7);

---Modified the term "insulation resistance" (see Chapter 3 of the 3.5,.2006 edition);

---Modified the "sample equipment, electrodes, sample processing" and other chapters (see Chapter 5,.2006 edition of Chapter 5 to Chapter 15, the first

Chapters 17 through 19);

--- Revised the "Test Report" (see Chapter 6, Chapter 16 of the.2006 edition);

--- Added "repetition and reproducibility" (see Chapter 7).

This section uses the translation method equivalent to IEC 62631-3-3.2015 "Dielectric and Electrical Properties of Solid Insulation Materials, Part 3-3.

Resistance characteristics (DC method) Insulation resistance.

The documents of our country that have a consistent correspondence with the normatively cited international documents in this section are as follows.

---GB/T 117-2000 tapered pin (ISO 2339. 1986, IDT);

---GB/T 10580-2015 Standard conditions for the use of solid insulating materials before and during testing (IEC 60212.2010,

IDT);

--- GB/T 11026.4-2012 Thermal insulation of electrical insulating materials - Part 4. aging oven single chamber oven (IEC 60216-

4-1.2006, IDT);

---GB/T 20774-2006 Hand 1.50 taper pin reamer (ISO 3465. 1975, MOD).

This section has made the following editorial changes.

--- Change the standard name to "Solid and dielectric properties of solid insulating materials - Part 4. Resistance characteristics (DC method)

resistance".

This part was proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Technical Committee for Standardization of Electrical Insulation Materials and Insulation Systems (SAC/TC301).

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Factory, China Quality Certification Center.

1 Scope

This part of GB/T 31838 specifies the test method for determining the insulation resistance of solid insulating materials under DC voltage.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Standard conditions for IEC 60212 solid insulation materials used before and during testing (Standard conditions for use prior

To and during the testing of solid electrical insulating materials)

IEC 60216-4-1 Thermal insulation of electrical insulating materials - Part 4-1. aging oven, single-chamber oven (Electrical insulating

materials-Thermal endurance properties-Part 4-1. Ageing ovens-Single-chamber ovens)

ISO 2339 taper pin is not hardened (Taper pins unhardened)

ISO 3465 Hand Taper Pin Reamer (Hand taper pin reamers)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Electrode device

Two conductor devices in contact with the surface of the test sample.

3.2

Conical pin electrode tapered pin electrodes

An electrode device using a tapered pin electrode.

Note. The schematic diagram of the tapered pin electrode is shown in Figure 1.