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

GB/T 20629.4-2021

**Non-cellulosic papers for electrical purposes - Part 4: Aramid
fibre paper containing mica particles**

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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"

drafted:

This document is part 4 of GB/T 20629 "Non-cellulose paper for electrical purposes": GB/T 20629 has released the following parts:

- Part 1: Definitions and general requirements;
- Part 2: Test methods;
- Part 3: Unfilled aramid fiber paper;
- Part 4: Polyaramid fiber paper containing mica particles:

This document uses the redrafting method to modify and adopt IEC 60819-3-4:2013 "Non-cellulose paper for electrical purposes - Part 3: Individual material specification

Fan Chapter 4: Polyaramid Fiber Paper Containing Less than 50% Mica Particles:

The technical differences between this document and IEC 60819-3-4:2013 and their reasons are as follows:

- Modified the content of Chapter 1 "Scope";
- Regarding normative reference documents, this document has made adjustments with technical differences to adapt to the technical conditions of our country and the circumstances of the adjustment:

The situation is reflected in Chapter 2 "Normative References", and the specific adjustments are as follows:

* Replace IEC 60819-1 with GB/T 20629:1 which is equivalent to adopting international standards;

* Replacing IEC 60819-2:2001 with GB/T 20629:2-2013 which adopts the international standard;

* Added references to GB/T 450, GB/T 455 and GB/T 5019:2-2009;

--- Added Chapter 3 "Terms and Definitions";

--- Added Chapter 4 "Classification and Nomenclature", and put the content of the relevant models in the Scope chapter in the international document into Chapter 4;

---In Table 1, the performance requirements for products with a thickness of 0.050mm are added; the performance requirements for products with a thickness of 0.150mm are deleted:

The required value of the product performance related to the thickness specification has been adjusted; the text content "mica content", "heat resistance grade", "moisture content"

Performance requirements such as "content", "dielectric loss factor" and "relative permittivity" are listed in Table 1, and the dielectric loss factor is not greater than 0.10

Adjust it to no more than 0.15; adjust the relative permittivity of type 1 paper from 4.5 ± 0.5 to 3.7 ± 0.5 ; adjust the relative capacitance of type 2 paper

rate from 3.0 ± 0.5 to 2.3 ± 0.5 ; changed "Edge Tear Resistance" to "Edge Tear Degree"; added "Tear Degree (Elmendo"

"Fu Law)" performance requirements;

--- Added Chapter 6 "Test Methods";

--- Added Chapter 7 "Inspection Rules";

--- Added Chapter 8 "Packaging, Marking, Transportation and Storage":

The following editorial changes have been made to this document:

--- Modify the file name to "Electrical Non-cellulose Paper Part 4: Polyaramid Fiber Paper Containing Mica Particles":

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

The electrical non-cellulose paper standard is widely used in the research and development, production, quality inspection, sales, acceptance and technical exchange of this series of products: formulate

This standard mainly solves the problem of the lack of this product standard in my country and the urgent need to apply and improve the product standard system: This standard system can

Guiding the industry to carry out the testing and quality evaluation of non-cellulose paper for electrical use can improve the quality and application reliability of such products:

GB/T 20629 specifies the definition and general requirements, test methods, and product standards of individual materials for electrical non-cellulose paper:

The column consists of four parts:

--- Part 1: Definitions and general requirements: The purpose is to determine the definition, general requirements and supply conditions of non-cellulose paper for electrical use:

--- Part 2: Test methods: The purpose is to determine a test method for electrical non-cellulose paper:

--- Part 3: Unfilled aramid fiber paper: The purpose is to determine the classification, requirements, test methods of unfilled aramid fiber paper

laws, inspection rules, packaging, marking, transportation and storage:

--- Part 4: Polyaramid fiber paper containing mica particles: The purpose is to determine the classification of aramid fiber paper containing mica particles

With nomenclature, requirements and test methods, inspection rules, packaging, marking, transportation and storage:

Electrical non-cellulose paper

Part 4: Aramid fiber paper containing mica particles

1 Scope

This document specifies the classification and nomenclature, requirements and test methods, inspection rules, packaging and

packaging, marking, transport and storage:

This document applies to aramid fiber paper containing mica particles of not more than 50% for electrical purposes:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document:

GB/T 450 Paper and cardboard sample collection and measurement of longitudinal, transverse, front and back sides of the sample (GB/T 450-2008, ISO 186:

2002, MOD)

GB/T 455 Determination of tear strength of paper and board (GB/T 455-2002, ISO 1974:1990, EQV)

GB/T 5019:2-2009 Mica-based insulating materials - Part 2: Test methods (IEC 60371-2:2004, MOD)

GB/T 20629:1 Non-cellulose paper for electrical purposes - Part 1: Definitions and general requirements (GB/T 20629:1-2006, IEC 60819-1:1995, IDT)

GB/T 20629:2-2013 Non-cellulose paper for electrical purposes - Part 2: Test methods (IEC 60819-2:2001, MOD)

3 Terms and Definitions

There are no terms and definitions that need to be defined in this document:

4 Classification and naming

The polyaramid fiber paper containing mica particles for electrical use is divided into the following two types:

---Type 1: Calendered aramid fiber paper containing mica particles;

---Type 2: Non-calendered aramid fiber paper containing mica particles:

5 Requirements

In addition to meeting the general requirements of GB/T 20629:1, the polyaramid fiber paper containing mica particles for electrical use should also meet the requirements in Table 1:

The specific performance requirements of the corresponding model: When assessing whether it meets the requirements of Table 1, the sampling method used shall be in accordance with the provisions of GB/T 450: try

The number of samples complies with GB/T 455 and GB/T 20629:2-2013 respectively: