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

GB/T 15022.9-2022

**Resin based reactive compounds used for electrical insulation -
Part 9: Resins for cable accessories**

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Standardization Administration**

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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 9 of GB/T 15022 "Resin-based Active Compounds for Electrical Insulation". GB/T 15022 has been released to

the next part.

--- Part 1. Definitions and general requirements;

--- Part 2. Test methods;

--- Part 3. Unfilled epoxy resin composites;

--- Part 4. Impregnating resin based on unsaturated polyester;

--- Part 5. Quartz filler epoxy resin compound;

--- Part 6. Epoxy casting resin for insulation of Class 1E distribution transformers in nuclear power plants;

--- Part 7. Epoxy anhydride vacuum pressure impregnation (VPI) resin;

--- Part 8. Epoxy-modified unsaturated polyester vacuum pressure impregnation (VPI) resin;

--- Part 9. Resin for cable accessories.

This document is equivalent to IEC 60455-3-8:2021 "Resin-based reactive composites for electrical insulation - Part 3. Specification for individual materials

Chapter 8. Resins for Cable Accessories.

The following minimal editorial changes have been made to this document.

--- In order to harmonize with existing standards, the name of the standard is changed to "Resin-based reactive compounds for electrical insulation - Part 9. For cable accessories

resin";

---The remarks of "dielectric loss factor at room temperature", "dielectric constant at room temperature" and "volume resistivity at room temperature" in Table 2~Table 5

Changed from "conductive silver paint as electrode material, 50Hz, 500V/mm" to "electrode material is conductive silver paint or other specified in the standard

Electrode material, 50Hz, 500V/mm";

--- Correct the "MI" in the required column of "Dielectric constant at room temperature" in Table 3 and Table 4 to "M";

--- Convert the original time unit "day" in the table to "h" to meet the requirements for the representation of international units.

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 standard of resin-based active compound for electrical insulation is widely used in the research and development, production, quality inspection, sales, acceptance and technical delivery of this series of products.

flow etc. This document can guide the industry to carry out the detection and quality assessment of resin-based active compounds for electrical insulation, and can improve the quality of such products.

quality and application reliability.

There are currently nine main types of resin-based active compounds for electrical insulation, corresponding to IEC 60455 (resins for electrical insulation).

The standard is divided into different parts (or articles), in order to maintain the basic consistency with the corresponding IEC standard preparation method, in addition

The technical performance requirements for different types of resin products are also different. When compiling this product standard, it is necessary to list different parts separately.

GB/T 15022 specifies the definition and general requirements, test methods, individual material products of resin-based reactive compounds for electrical insulation

The standard consists of the following parts.

--- Part 1. Definitions and general requirements. The purpose is to determine the nomenclature, definition, classification and

General requirements.

--- Part 2. Test methods. The purpose is to determine a test method for resin-based reactive composites for electrical insulation.

--- Part 3. Unfilled epoxy resin composites. The purpose was to determine the post-curing requirements for unfilled epoxy resin compounds.

--- Part 4. Impregnating resin based on unsaturated polyester. The purpose is to identify general requirements for unsaturated polyester based impregnating resins.

--- Part 5. Quartz filler epoxy resin composites. The purpose was to determine the post-curing requirements of the epoxy resin compound of the quartz filler.

--- Part 6. Epoxy casting resin for insulation of Class 1E distribution transformers in nuclear power plants. The purpose is to determine the level 1E distribution transformer of nuclear power plant

Requirements, test methods, inspection rules, and packaging, marking, storage and transportation of epoxy resin for device insulation.

--- Part 7. Epoxy anhydride vacuum pressure impregnation (VPI) resin. The objective was to identify epoxy anhydride vacuum pressure impregnation (VPI) resins

requirements, test methods, inspection rules and packaging, marking, storage and transportation.

--- Part 8. Epoxy-modified unsaturated polyester vacuum pressure impregnation (VPI) resin. The purpose is to determine the epoxy modified unsaturated polyester

Classification, requirements, test methods, inspection rules and packaging, marking, storage and transportation of vacuum pressure impregnation (VPI) resins.

--- Part 9. Resin for cable accessories. The purpose is to determine the terms and definitions, nomenclature, type tests, tests of resins for cable accessories

Methods, packaging, signs and labels.

Resin-based reactive compound for electrical insulation

Part 9. Resins for cable accessories

1 Scope

This document specifies the terms and definitions, nomenclature, type tests, test methods, packaging, marking and

Label.

This document applies to insulating resins for power cable accessories.

A material that meets the requirements of this document and meets a confirmed level of

performance. However, in a specific application, the user is based on the actual application. Materials are selected based on the specific performance requirements required, not only according to this document.

The material in this document is used for low and medium voltage cable accessories, so its electrical performance is verified as part of the assembly. EN50393 and IEC 60502-4 with corresponding examples.

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.

properties)

Note. GB/T 1043 (all parts) Determination of impact properties of plastic simply supported beams [ISO 179 (all parts)]

Note. GB/T 1040 (all parts) Determination of tensile properties of plastics [ISO 527 (all parts)]

Note. GB/T 2411-2008 Determination of indentation hardness (Shore hardness) using a durometer for plastics and hard rubber (ISO 868:2003, IDT)

ISO 1183-1 Methods for the determination of the density of plastics, non-foamed plastics - Part 1. Impregnation, pycnometer and titration methods

Note. GB/T 1033.1-2008 Determination of the density of non-foamed plastics - Part 1. Impregnation method, pycnometer method and titration method (ISO 1183-1.

2004, IDT)

Note. GB/T 269-1991 Grease and Petroleum Grease Penetration Determination (eqv ISO 2137:1985)

ISO 2555 Plastics - Determination of apparent viscosity by single-cylinder rotational viscometer method for resins in liquid or emulsified or dispersed state (Plastics-

Note. GB/T 40280-2021 Determination of apparent viscosity with a single-cylinder rotational viscometer for resins in liquid or emulsion state or dispersion system of plastics (ISO 2555.

2018, IDT)

ISO 4895 Determination of the crystallization potential of plastics liquid epoxy resins