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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 43084.1-2023

Plastics - Fluoropolymer dispersions and moulding and extrusion materials - Part 1: Designation system and basis for specifications

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1.Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is Part 1 of GB/T 43084 "Plastic Fluoropolymer Dispersions, Molding and Extrusion Materials". GB/T 43084 has been issued.

The following parts have been published.

---Part 1.Nomenclature system and classification basics

---Part 2.Sample preparation and performance determination

This document is modified using ISO 20568-1.2017 "Plastic fluoropolymer dispersions, molding and extrusion materials - Part 1.Nomenclature

Fundamentals of Systems and Classification.

Compared with ISO 20568-1.2017, this document has made the following structural adjustments.

---Added 4.5.1;

---4.5.2 corresponds to 4.5.1 of ISO 20568-1.2017;

---4.5.2.1, 4.5.2.1.1 correspond to 4.5.1.1 of ISO 20568-1.2017;

---4.5.2.1.2~4.5.2.1.4 corresponds to 4.5.1.1.1~4.5.1.1.3 of ISO 20568-1.2017;

---4.5.2.2 corresponds to 4.5.1.2 of ISO 20568-1.2017;

---Added 4.5.2.2.1;

---4.5.2.2.2~4.5.2.2.4 corresponds to 4.5.1.2.1~4.5.1.2.3 of ISO 20568-1.2017;

---4.5.3 corresponds to 4.5.2 of ISO 20568-1.2017;

---4.5.3.1 corresponds to 4.5.2.1 of ISO 20568-1.2017;

---Added 4.5.3.1.1;

---4.5.3.1.2, 4.5.2.1.3 correspond to 4.5.2.1.1, 4.5.2.1.2 of ISO 20568-1.2017;

---4.5.3.2~4.5.3.4 corresponds to 4.5.2.2~4.5.2.4 of ISO 20568-1.2017;

---Added 4.5.3.4.1;

---4.5.3.4.2~4.5.3.4.4 corresponds to 4.5.2.4.1~4.5.2.4.3 of ISO 20568-1.2017.

The technical differences between this document and ISO 20568-1.2017 and their reasons are as follows.

---Replaced ISO 1043-1.2011 (see 4.2) with normatively cited GB/T 1844.1 to adapt to my country's technical conditions, adding

Increase operability;

---Replaced ISO 472.1999 (see Chapter 3) with normatively cited GB/T 2035 to adapt to my country's technical conditions, adding

Operability;

---Replaced ISO 20568-2.2017 (see 4.5.2, 4.5.3) with normatively quoted GB/T 43084.2 to adapt to my country's technology

technical conditions to increase operability;

---Replaced ISO 1133-1.2011 (see 4.5.3.1.3) with normatively quoted GB/T 3682.1 to adapt to my country's technical conditions

parts to increase operability;

---Replaced ISO 11357-2.1999 (see 4.5.3.3) with normatively quoted GB/T 19466.2 to adapt to my country's technology

technical conditions to increase operability;

---Replaced ISO 11357-3.1999 (see 4.5.3.1.2) with normatively quoted GB/T 19466.3 to adapt to my country's technology

conditions to increase operability;

---For naming examples, change the reference of the standard number in the example "ISO 20568-1" to "GB/T 43084" (see Chapter 5), instead of

The naming system of other national standards for plastic resins remains consistent.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

Introduction

Most of my country's existing standards related to fluoropolymer dispersions, molding and extrusion materials were released in.1997, and they are all product standards.

However, there is a lack of nomenclature system and basic classification standards for fluoropolymers. Some of the normative reference documents have been revised and changed. To contain

For the healthy development of the fluoropolymer industry, better promotion and application, and domestic and foreign trade and technical exchanges, there is an urgent need to integrate various existing standards among industry enterprises.

industry-implemented naming method, form standardized naming, unify product naming, and formulate fluoropolymer dispersions, molding and

National standard for nomenclature and classification of extrusion materials.

After studying the national and industry standards for plastic-fluoropolymer dispersions, molding and extrusion materials at home and abroad, a comparative analysis was conducted.

ISO 20568.2017, GB/T 43084 aims to standardize the naming, classification and performance determination of fluoropolymer dispersions, molding and extrusion materials

and sample preparation, which is intended to consist of two parts.

---Part 1.Nomenclature system and classification basics. The aim is to introduce a complete nomenclature system for fluoropolymers.

---Part 2.Sample preparation and performance determination. The purpose is to establish a standardized set of standard methods for test preparation and performance measurement.

The two parts complement each other to form a complete standard system of fluoropolymers.

The issuance and implementation of this document can standardize the sample preparation and performance measurement of fluoropolymer dispersions, molding and extrusion materials to meet customer needs.

requirements to better promote trade, exchanges and technical cooperation.

Plastic fluoropolymer dispersions, molding and extrusion materials

Part 1.Nomenclature systems and classification basics

1 Scope

This document establishes the naming rules and classification basis for fluoroplastics.

A systematic approach is used to classify and name different fluoropolymers, mainly based on the unique properties, uses, processing methods,

Main properties, additives, colorants, fillers, reinforced plastics and other information are classified.

Among them, polytetrafluoroethylene (PTFE) is classified into granular PTFE or dispersion-agglomerated PTFE resin for molding and extrusion based on the standard

Quasi relative density (SSG), bulk density, particle size.

The classification of PTFE dispersions is based on solid content, surfactant percentage, and surfactant tolerance level.

Meltable processable resins (CPT, ECTFE, EFEP, ETFE, FEP, PFA, PVDF, PVF, VDF/CTFE, VDF/

The classification of HFP, VDF/T FE, VDF/T FE/HFP) is based on melting temperature and melt mass flow rate.

The classification of PCTFE is based on zero intensity time (ZST).

The classification of TFE/PDD is based on glass transition temperature (Tg).

Melt processable resin dispersion (ETFE, FEP, PFA, PVDF, PVF, VDF/CTFE, DVF/HFP, VDF/T FE,

VDF/T FE/HFP) classification is based on solid content, surfactant content, and surfactant tolerance level.

This nomenclature applies to all fluoropolymers and their mixtures. Suitable for unmodified materials and modified materials, such as colorants, additives

Modified materials such as additives, fillers, reinforcing agents and polymer modifiers.

Materials with the same designation do not necessarily have the same properties. This document is not intended to describe specific uses and/or processing of materials.

Engineering data, performance data or processing condition data required for the method. If necessary, use the test method specified in GB/T 43084.2 to determine

these additional requirements.

2 Normative reference documents

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

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all