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

GB/T 6594-1986

**Plastics - Polystyrene(PS) moulding and extrusion materials -
Part 1: Designation system and basis for specifications
(English Translation)**

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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 for standardization documents" Drafting.

This document is Part 1 of GB/T 6594 "Plastic Polystyrene (PS) Molding and Extrusion Materials". GB/T 6594 has been published the following parts.

- Part 1: Nomenclature system and basis of classification;
- Part 2: Sample preparation and property determination.

This document replaces GB/T 6594.1-1998 "Polystyrene (PS) molding and extrusion materials Part 1: Nomenclature system and classification basis Compared with GB/T 6594.1-1998, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) Changed some of the scope, added descriptions of applicable material shapes, and specified additional information for special-purpose materials in character group 5.

The required description is changed to the clauses related to character group 5 (see Chapter 1 and 4.6, 1.5 and 3.4 of the 1998 edition);

b) Added description group and standard number section (see Chapter 4);

c) Changed the order of character groups in named feature item groups (see 4.1, Chapter 3 of the 1998 edition);

d) Added the provisions for character group 2 (see 4.3);

e) Added the explanation that the codes of character group 3 can omit the natural color (N) and (or) particles (G) (see 4.4);

- f) Added letter codes for important properties, additives and colors (see 4.4);
- g) The Vicat softening temperature code has been changed (see 4.5.2, 3.3.1 of the 1998 edition);
- h) The provisions for melt mass flow rate code have been changed (see 4.5.3, 3.3.2 of the 1998 edition);
- i) Added a naming example (see Chapter 5).

This document is modified to adopt ISO 24022-1:2020 "Plastics Polystyrene (PS) molding and extrusion materials Part 1: Designation system and the basis of classification.

The technical differences between this document and ISO 24022-1:2020 and their reasons are as follows.

- a) Changed some of the contents of the scope, added the description of the applicable material shape, and added the additional information of the special purpose materials in character group 5.

The description of the requirements has been moved to the clauses related to character group 5 (see Chapter 1 and 4.6) to make the standard clearer and easier to understand.

Application of this document;

- b) The normative reference GB/T 1844.1 replaces ISO 1043-1 (see 4.1) to adapt to my country's technical conditions and increase operability.

Sex;

- c) ISO 1043-2 (see 4.3) has been deleted to make the standard content clearer and to facilitate the application of this document;

- d) Added the explanation that the codes of character group 3 can be omitted for natural color (N) and/or granular (G) (see 4.4) to make the standard more clear;

- e) The normative reference GB/T 6594.2 replaces ISO 24022-2 (see 4.5.2 and 4.5.3) to adapt to my country's technical requirements.

parts, increasing operability;

- f) The Vicat softening temperature and melt mass flow rate classification ranges and effective digits have been changed (see 4.5.2 and 4.5.3) to adapt to my country's technical conditions and increase operability.

Introduction

GB/T 6594 is the basic standard for polystyrene resin and provides support for polystyrene product standards.

ISO 24022 standard, due to the change of ISO standard guidelines, the naming system has been adjusted accordingly, closely related to sample preparation and performance determination.

All relevant test method standard parts have been revised and there are technical differences, so GB/T 6594 is revised.

GB/T 6594 "Plastic Polystyrene (PS) Molding and Extrusion Materials" consists of two parts.

--- Part 1: Naming system and classification basis. The purpose is to establish a standard model for the naming of polystyrene materials Methods and classification principles.

--- Part 2: Sample preparation and performance determination. The purpose is to establish the sample preparation method and performance test for polystyrene materials Measurement items, methods and conditions.

This document describes the characteristics of polystyrene (PS) molding and extrusion materials with specified characteristic property values and recommended uses and/or processing.

Different types of polystyrene molding and extrusion materials are studied, including methods, important properties, additives, colorants, fillers and reinforcements.

distinguish.

Plastic polystyrene (PS) molding and extrusion materials Part 1: Nomenclature system and basis of classification

1 Scope

This document specifies a naming system for polystyrene (PS) thermoplastic materials as a basis for classification.

Different types of polystyrene (PS) thermoplastic materials are specified with the following characteristic property values and recommended uses and/or processing A classification system based on methods, important properties, additives, colorants, fillers and reinforcements distinguishes.

- a) Vicat softening temperature;
- b) Melt mass flow rate.

This document applies to all amorphous polystyrene homopolymers. This document applies to conventional forms such as powder, granules or crushed particles, which are not Materials that are modified or have been modified by colorants, additives, fillers, etc.

This document does not apply to expandable polystyrene, styrene copolymers, homopolymers of styrene derivatives and other polymers (such as elastic Polystyrene

product modified by polyol (polystyrene).

This document does not imply that materials with the same name necessarily have the same properties. This document is not intended to provide information on specific uses and (or) engineering data, performance data or processing condition data required for the processing method. If necessary, use the test method specified in GB/T 6594.2 these additional properties cannot be determined.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 1844.1 Plastics symbols and abbreviations Part 1: Basic polymers and their characteristic properties (GB/T 1844.1-2022,ISO 1043-1:2011,MOD) GB/T 6594.2 Plastics Polystyrene (PS) molding and extrusion materials Part 2: Sample preparation and property determination (GB/T 6594.2-2025,ISO 24022-2:2020, MOD)

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4.1 General

The naming and classification system for polystyrenes is based on the following standard model.