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

GB/T 15597.1-2024

Replacing GB/T 15597.1-2009

**Plastics - Poly(methyl methacrylate)(PMMA) moulding and
extrusion materials - Part 1: Designation system and basis for
specifications**

塑料 聚甲基丙烯酸甲酯 (PMMA) 模塑和挤出材料 第1部分: 命名系统和分类基
础

(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 15597 "Plastics Polymethyl Methacrylate (PMMA) Moulding and Extrusion Materials".

GB/T 15597 has published the following two parts.

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

This document replaces GB/T 15597.1-2009 "Plastics Polymethyl Methacrylate (PMMA) Molding and Extrusion Materials Part 1 Nomenclature and basis of classification.

Compared with GB/T 15597.1-2009, in addition to structural adjustments and editorial changes, the main technical changes of this document are as follows.

- a) The character group order of the named feature item group has been changed (see 4.1, Chapter 3 of the 2009 edition).

This document is modified to adopt ISO 24026-1:2020 "Plastics Polymethyl methacrylate (PMMA) molding and extrusion materials Part 1 Nomenclature and basis of classification.

The technical differences between this document and ISO 24026-1:2020 and their reasons are as follows.

- ISO 1043-1 (see 4.1, 4.2) has been replaced by the normative reference GB/T 1844.1 to adapt to my country's technical conditions, and the addition of Operability;
- The normative reference GB/T 15597.2 replaces ISO 24026-2 (see 4.5.2, 4.5.3, 4.5.4) to

adapt to my country's technical requirements.

Technical conditions and increase operability.

The following editorial changes were made to this document.

--- For naming examples, change the reference of the standard number "ISO 24026" in the example to "GB/T 15597", which is consistent with other plastic resin countries.

The naming system of the national standard is consistent.

Introduction

GB/T 15597 is the basic standard for the classification and naming, sample preparation and performance determination of polymethyl methacrylate resin.

It provides support for the evaluation and application of methyl acrylate products and the formulation of product standards.

GB/T 15597 "Plastics Polymethyl Methacrylate (PMMA) Molding and Extrusion Materials" is intended to consist of two parts.

--- Part 1: Nomenclature system and basis of classification. The purpose is to introduce a complete nomenclature system for polymethyl methacrylate.

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

The publication and implementation of this document standardizes the naming of polymethyl methacrylate molding and extrusion materials to meet customer requirements and better promote Promote trade, exchanges and technical cooperation.

Plastic polymethyl methacrylate (PMMA) Molding and extrusion materials Part 1:
Nomenclature system and basis of classification

1 Scope

This document specifies the naming system for the thermoplastic polymethyl methacrylate (PMMA) material.

The types of PMMA plastics are classified according to the values of the following characteristic properties and the relevant intended use/processing methods, important properties, additives and pigments.

The classification system based on color information distinguishes.

a) Vicat softening temperature;

b) melt mass flow rate;

c) Viscosity number (optional).

This document applies to polymethyl methacrylate homopolymers and also to copolymers containing at least 80% by mass of methyl methacrylate.

Methyl acrylate (MMA) and not more than 20% by mass of acrylate or other monomers.

This document applies to materials used in granular form and to unmodified and modified materials with the addition of colorants, additives, etc.

This document is not applicable to elastomer-modified PMMA.

Materials with the same name in this method may not necessarily have the same properties. This document of GB/T 15597 does not provide for special purposes/processing Engineering data, performance data or processing condition data required for the material of the method.

If these additional properties are required, they may be measured according to the method specified in Part 2 of GB/T 15597.

In order to specify special uses of thermoplastic materials or to ensure reproducibility of processing, additional requirements may be given in character group 5 (see 4.1).

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 15597.2 Plastics Polymethyl methacrylate (PMMA) molding and extrusion materials Part 2: Specimen preparation and properties Determination (GB/T 15597.2-2024, ISO 24026-2:2020, MOD)

3 Terms and definitions

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

4.1 General

The naming system for polymethyl methacrylate (PMMA) is based on the following standard model.