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

GB/T 46827.1-2025

**Plastics - Methyl methacrylate-acrylonitrile-butadiene-styrene(MABS)
moulding and extrusion materials - Part 1: Designation system and
basis for specifications**

塑料 甲基丙烯酸甲酯-丙烯腈-丁二烯-苯乙烯 (MABS) 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 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 GB/T 46827 "Methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) Molding and Extrusion Materials".

Part 1 of GB/T 46827 has been published, including the following parts.

---Part 1: Naming Systems and Classification Basics;

---Part 2: Sample preparation and performance determination.

This document is modified to adopt ISO 19066-1:2014 "Methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) molding plastics".

Extruded materials, Part 1: Nomenclature system and classification basis.

This document includes a new chapter on "Terms and Definitions".

The technical differences between this document and ISO 19066-1:2014, and the reasons therefor, are as follows.

a) Part of the scope has been changed, modifying the description of additional requirements for special purpose materials in character group 5 to match the character group.

5.The relevant clauses are included to make the standard content clearer and facilitate the application of this document (see Chapter 1 and 4.6);

b) ISO 1043-1 (see 4.1 and 4.2) has been replaced with the normatively referenced GB/T

1844.1 to adapt to my country's technical conditions, and [further details are needed].

Increase operability;

c) The normative reference to ISO 1043-2 (see 4.3) has been removed to make the standard clearer and facilitate the application of this document;

d) The content on rounding the mass fraction of fillers and/or reinforcing materials has been added (see 4.3) to facilitate the application of this document;

e) Added explanations regarding the omission of the symbols for natural color (N) and/or particle (G) in character group 3 (see 4.4) to make the standard more standardized.

clear;

f) ISO 10336-2:2003 (see 4.2, 4.5.2~4.5.5) has been replaced with the normatively referenced GB/T 46827.2 to adapt to my country's national standards.

The technical conditions are improved to increase operability;

g) The conditions for pre-test sample storage have been changed (see 4.5.2 and 4.5.3) to increase operability;

h) The effective digits of the melt volumetric flow rate and the notched impact strength of the simply supported beam were modified (see 4.5.3 and 4.5.4) to suit Chinese conditions.

The technical conditions are improved to increase operability.

The following editorial changes have been made to this document.

---Added one style for naming abbreviations in the naming examples (see Chapter 5).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Plastics Standardization (SAC/TC15).

Introduction

GB/T 46827 "Methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) molding and extrusion materials" is proposed to be divided into two standards.

Partial composition.

---Part 1: Naming System and Classification Basis. The aim is to establish a standard naming convention applicable to MABS materials.

Formulas and classification principles.

---Part 2: Sample Preparation and Performance Measurement. The aim is to establish suitable sample preparation methods and performance measurement techniques for MABS materials.

Define the project, methods, and conditions.

Plastic methyl methacrylate-acrylonitrile-butadiene-MABS molding and extrusion materials
Part 1: Naming Systems and Classification Basics

1 Scope

This document defines the nomenclature system for methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) thermoplastic materials.

The system serves as the basis for classification.

Different types of MABS plastic materials are specified with the following characteristic property values, composition information, recommended uses and/or processing methods.

This classification system distinguishes materials based on their properties, key characteristics, additives, colorants, fillers, and reinforcing materials.

- a) Vicat softening temperature;
- b) Melt volumetric flow rate;
- c) Notched impact strength of a simply supported beam;
- d) Tensile modulus of elasticity.

This document applies to applications where the main continuous phase is a copolymer of styrene (and/or substituted styrene), acrylonitrile, and methyl methacrylate, with butadiene as the primary phase.

A methyl methacrylate-acrylonitrile-butadiene-styrene material with diene as the dispersed phase.

This document applies to MABS that is typically in powder, granule, or crushed form, and is either unmodified or modified with colorants, additives, fillers, etc.

Material.

This document does not imply that materials with the same name necessarily have the same properties. This document does not provide information for describing the specific uses and/or applications of materials.

Engineering data, performance data, or process parameters required for the processing method. If necessary, determine the parameters using the test methods specified in GB/T 46827.2.

These additional properties.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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

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 46827.2 Plastics - Methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) molding and extrusion materials - Part 2 Part. Sample preparation and performance determination (GB/T 46827.2-2025, ISO 19066-2:2020, MOD)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4.1 General Rules

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