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

GB/T 47391.1-2026

**Plastics - Unsaturated-polyester powder moulding compounds
(UP-PMCs) - Part 1: Designation system and basis for
specifications**

(English Translation)

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document is Part 1 of GB/T 47391 "Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs)". GB/T 47391 has already issued the following parts.

- Part 1: Designation system and basis for specifications;
- Part 2: Preparation of test specimens and determination of properties;
- Part 3: Requirements for selected moulding compounds.

This document is modified adopted from ISO 14530-1:1999 "Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 1: Designation system and basis for specifications".

The technical differences between this document and ISO 14530-1:1999 and their reasons are as follows.

- REPLACE ISO 14530-2 with the normatively referenced GB/T 47391.2 (see Clauses 1 and 3 of this document), to adapt to the technical conditions of China;
- REPLACE ISO 14530-3 with the normatively referenced GB/T 47391.3 (see Clause 1 of this document), to adapt to the technical conditions of China;
- REPLACE ISO 472 with the normatively referenced GB/T 2035 (see Clause 3 of this document), to adapt to the technical conditions of China;
- REPLACE ISO 1043-1:1997 with the normatively referenced GB/T 1844.1-2022 (see 4.1 and 4.2 of this document), to adapt to the technical conditions of China;

- REPLACE ISO 179-1 with the normatively referenced GB/T 1043.1 (see 4.1 and 4.4.3 of this document); to adapt to the technical conditions of China;
- REPLACE ISO 75-2 with the normatively referenced GB/T 1634.2 (see 4.1 and 4.4.4 of this document), to adapt to the technical conditions of China;
- REPLACE ISO 1043-2 with the normatively referenced GB/T 1844.2 (see 4.1 and Table 1 of this document), to adapt to the technical conditions of China.

The following editorial changes have been made to this document.

- ADD a note to the term "powder moulding compound" (see 3.1 of this document).

Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 1:
Designation system and basis for specifications

1 Scope

This document establishes the designation system for unsaturated-polyester powder moulding compounds (UP-PMCs).

The various types of UP-PMC are differentiated by a classification system based on information such as the type and content of fillers/reinforcing materials, the moulding processing method, special properties, and special properties used specifically for designation purposes (designatory properties).

This document applies to the designation of all general-purpose UP-PMCs in powder, granular, or ground form.

Materials with the same designation do not necessarily possess identical properties.

This document does not provide engineering data, property data, or data on processing conditions required for moulding or specific applications. If such additional property data are required, they shall be determined in accordance with the applicable test methods specified in GB/T 47391.2.

The designation system established in this document is also used where the general property requirements specified in GB/T 47391.3 need to be indicated.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 1043.1 Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (GB/T 1043.1-2008, ISO179-1:2000, IDT) GB/T 1634.2 Plastics -

Determination of temperature of deflection under load - Part 2: Plastics and ebonite (GB/T 1634.2-2019, ISO75-2:2013, MOD) GB/T 1844.1-2022 Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1:2011, MOD) GB/T 1844.2 Plastics - Symbols and abbreviated terms - Part 2: Fillers and reinforcing materials (GB/T 1844.2-2022, ISO 1043-2:2011, IDT) GB/T 2035 Plastics - Vocabulary GB/T 47391.2 Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 2: Preparation of test specimens and determination of properties (GB/T 47391.2-2026, ISO 14530-2:1999, MOD) GB 47391.3 Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 3: Requirements for selected moulding compounds (GB/T 47391.3-2026, ISO14530-3:1999, MOD)

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in GB/T 2035 and GB/T 47391.2, as well as the following, apply.

powder moulding compound; PMC Powdered, granular, or ground material capable of flowing freely in the feed systems of moulding-processing equipment.

NOTE: Flake-form materials are generally not regarded as powder moulding compounds.

unsaturated-polyester powder moulding compound; UP-PMC Powder moulding compound based on unsaturated-polyester resin, suitable for injection moulding and compression moulding.

4.1 General

The designation method specified in this document is based on the following standard pattern.

The designation consists of an optional description block (written as "PMC") and an identity block (comprising the standard number and an individual-item block). The individual-item block is further subdivided into five data blocks, each containing specific information.

Data block 1. Marking block Item 1. Abbreviation for the basic polymer, in accordance with GB/T 1844.1;

Item 2. Letter code for the fillers and reinforcing materials, in accordance with GB/T 1844.2;

Item 3. Letter code for the form of fillers and reinforcing materials, in accordance with GB/T 1844.2;

Item 4. Nominal content of the fillers and reinforcing materials, in accordance with

Table 1.

Data block 2. Processing method Letter code for the processing method of moulding compound, in accordance with Table 2.

Data block 3.Properties Item 1.Special properties, in accordance with Table 3;

Item 2.Designatory property 1 - Impact strength determined in accordance with GB/T 1043.1;

Item 3.Designatory property 2 - Thermal resistance determined in accordance with GB/T 1634.2.

Data block 4.Supplementary information, in accordance with relevant international, national, or company standards.

Data block 5 (optional). Additional requirements Individual-item blocks shall begin with a hyphen, and data blocks shall be separated from each other by commas.