

ICS 83.080.01



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

GB/T 47391.3-2026

**Plastics - Unsaturated-polyester powder moulding compounds
(UP-PMCs) - Part 3: Requirements for selected moulding
compounds**

(English Translation)

Issued on: March 31, 2026

Implemented on: October 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Foreword...	3
Introduction...	5
1 Scope...	6
2 Normative references...	6
3 Terms and definitions...	7
4 Requirements...	7
5 Test methods...	9
6 Inspection rules...	9
7 Marking, packaging, transportation, and storage...	11

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 3 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 14530-3.1999 "Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 3.Requirements for selected moulding compounds".

The technical differences between this document and ISO 14530-3 and their reasons are as follows.

- MODIFY the scope (see Clause 1 of this document);
- REPLACE ISO 14530-1 with the normatively referenced GB/T 47391.1 (see Clause 1, Clause 3, and 4.2 of this document), to adapt to the technical conditions

of China;

- REPLACE ISO 14530-2:1999 with the normatively referenced GB/T 47391.2-

2026 (see Clause 1, Clause 3, note 1 to Table 1, and 5.1 ~ 5.3 of this document), to

adapt to the technical conditions of China;

- MODIFY the test condition for dielectric dissipation factor in Table 1 from 100 Hz

to 1 MHz, to adapt to the technical conditions of China;

- ADD Clause 5 "Test methods", to adapt to the technical conditions of China;

- ADD Clause 6 "Inspection rules", to adapt to the technical conditions of China;

- ADD Clause 7 "Marking, packaging, transportation, and storage", to adapt to the technical conditions of China.

The following editorial changes have been made to this document.

- ADD note 3 to Table 1;

Plastics - Unsaturated-polyester powder moulding

compounds (UP-PMCs) - Part 3. Requirements for selected

moulding compounds

1 Scope

This document specifies the physical and chemical properties, inspection rules, marking, packaging, transportation, and storage of unsaturated-polyester powder moulding compounds (UP-PMCs) and their compression-moulded or injection-moulded test specimens, and describes the test methods.

This document applies to the production and inspection of three selected types of unsaturated-polyester powder moulding compounds.

The properties used to characterize moulding compounds, as well as the corresponding test methods and test conditions, are selected from GB/T 47391.2-2026.

Moulding compounds are classified into different models according to composition and properties. Moulding compounds of different models shall be designated in accordance with GB/T 47391.1.

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 2035 Plastics - Vocabulary (GB/T 2035-2024, ISO 472:2013, NEQ)

GB/T 2547 Plastics - Sampling method

GB/T 47391.1 Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 1.Designation system and basis for specifications (GB/T 47391.1-2026, ISO 14530-1:1999, MOD)

GB/T 47391.2-2026 Plastics - Unsaturated-polyester powder moulding compounds (UP-PMCs) - Part 2.Preparation of test specimens and determination of properties (ISO 14530-2:1999, MOD)

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in GB/T 2035, GB/T 47391.1, and GB/T 47391.2-2026 apply.

4.1 Property values

Unsaturated-polyester powder moulding compounds complying with this document shall meet the property requirements given in Table 1.

No specific limits are specified for rheological and processing properties. However, suitable rheological and processing properties are essential for the service performance of moulding compounds; therefore, test methods and test conditions shall be agreed between the supplier and the purchaser.

In addition, for certain applications, additional property data may be required, for example.

- cure time;
- particle size;
- moisture content.

If required, these properties, together with the test methods and test conditions used, shall also be agreed between the supplier and the purchaser.

4.2 Type and content of fillers/reinforcing materials

For unsaturated-polyester powder moulding compounds, the name, form, and content of fillers/reinforcing materials shall comply with the provisions of GB/T 47391.1.

5.1 Preparation of test specimens

Preparation of test specimens shall be in accordance with Clause 4 of GB/T 47391.2-2026.

5.2 Conditioning of test specimens

Conditioning of test specimens shall be in accordance with Clause 5 of GB/T 47391.2-2026.

5.3 Test methods

Test methods and test conditions shall be in accordance with Clause 6 of GB/T 47391.2-2026.

The properties given in Table 1 are each the average value of test results obtained from a set of test specimens. For properties listed as items 2.1, 2.2, 2.3, and 2.4 in the table, the deviation between an individual test value and the average value shall be less than

10 %; for properties listed as items 3.1 and 3.2, the deviation between an individual

determined value and the average value shall be less than 5 °C.

6.1.1 Batching rules

Products of the same grade, mixed in one batch, manufactured on the same production line with identical raw materials and identical process shall constitute one batch.

6.1.2 Sampling plan

It shall be carried out in accordance with GB/T 2547.

.....