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

GB/T 46607.2-2025

**Plastics - Injection moulding of test specimens of
thermosetting powder moulding compounds (PMCs) - Part 2:
Small plates**

塑料 热固性粉末模塑料 (PMCs) 试样的制备 第2部分: 小板

(English Translation)

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Table of Contents

Foreword
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Equipment
4.1 Type D1 ISO mold and Type D2 ISO mold

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 Part 2 of GB/T 46607 "Preparation of specimens for thermosetting powder molding compounds (PMCs)". GB/T 46607 the following sections have been released.

---Part 1: General Principles and Preparation of Versatile Samples;

---Part 2: Small Board.

This document is modified to adopt ISO 10724-2:1998 "Preparation of specimens for thermosetting powder molding compounds (PMCs) - Part 2.

Small board.

The technical differences between this document and ISO 10724-2:1998, and the reasons therefor, are as follows.

a) ISO 472 (see Chapter 3) has been replaced with the normatively referenced GB/T 2035 to adapt to my country's technical conditions and increase operability.

Actual nature;

b) ISO 10724-1:1998 (see Chapters 3, 4.1, 4.2, and 5) has been replaced by the normatively referenced GB/T 46607.1-2025.

Chapter 6 and Appendix C) indicate a degree of consistency between the two documents, which have been revised to adapt to my country's technical conditions and increase operability.

c) 4.1b), d), and e) were deleted and renumbered to remove invalid information and improve usability.

The following editorial changes have been made to this document.

- a) Footnotes 1, 2, and 3 of Chapter 2 have been deleted.
- b) ISO 2577 has been replaced by GB/T 39818 (see Notes 1 and 2 of 4.1, and Annex A);
- c) ISO 6603-1 (see 4.1) has been replaced by GB/T 44559.1 (see informative reference);
- d) ISO 62:1980 was replaced by the informative standard GB/T 1034-2008, and GB/T 1040.1-2025 was replaced by the standard GB/T 1034-2008.

ISO 527-1:1993 and GB/T 16422.2-2022 have replaced ISO 4892-2:1994 and GB/T 19467.1-2004.

ISO 10350-1:1998 and GB/T 37188.1-2019 have replaced ISO 11403-1:1994 and GB/T 37188.2-2018.

It replaces ISO 11403-2:1995, and GB/T 39812-2021 replaces ISO 2818:1994 (see Appendix A).

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

During the injection molding process, many factors can affect the performance of the specimen, thereby influencing the specimen measurements obtained in the testing methods. The heat of the specimen...

The chemical and mechanical properties depend to a large extent on the molding process conditions for preparing the specimen. Precise determination of the main parameters of the molding process is necessary.

The purpose is to achieve repeatability of the injection molding process and comparability of operating conditions.

When determining molding conditions, consider any effects these conditions may have on the properties to be measured. Thermosetting plastics may be affected by fillers.

Differences can be observed due to variations in the orientation, length, and curing process of the material (such as short fibers). Residual ("frozen") stress in the molded specimen can also contribute to these variations.

It can affect performance. Due to the molecular cross-linking of thermosetting plastics, molecular orientation has less impact on mechanical properties than that of thermoplastics. Strictly adhere to these guidelines.

All these phenomena are controlled to avoid fluctuations in performance measurement values.

GB/T 46607 "Preparation of specimens for thermosetting powder molding compounds (PMCs)" is proposed to consist of two parts.

---Part 1: General Principles and Preparation of Versatile Specimens. This section specifies the procedures for preparing specimens of thermosetting powder molding compounds (PMCs).

Following general principles, ensure the consistency of key parameters in the molding process.

---Part 2: Small Plate. Two types of dual-cavity molds are specified, which can be used for electrical properties, water absorption properties, dynamic mechanical properties, and multiaxial impact strength.

Degree and molding shrinkage tests are used to study the anisotropy of mechanical and thermal properties and the influence of welding lines.

The two parts complement each other and constitute a complete standard system for the preparation of thermosetting powder molding compound (PMC) specimens.

Thermosetting powder molding compounds (PMCs) Sample Preparation Part 2: Small Plates

1 Scope

This document specifies two types of double-cavity molds, type D1 ISO mold and type D2 ISO mold, for injection molding 60mm x 60mm...

Small plates, with thicknesses of 1 mm (Type D1) or 2 mm (Type D2), are used for various tests (see Appendix A). The mold also includes inserts for further research.

The effect of wire bonding on mechanical properties (see Appendix B).

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 2035 Plastics Terminology (GB/T 2035-2024, ISO 472:2013, NEQ) GB/T 46607.1-2025 Preparation of specimens for thermosetting powder molding compounds (PMCs) - Part 1: General principles and procedures Preparation of test specimens for application (ISO 10724-1:1998, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 2035 and GB/T 46607.1-2025 apply to this document.

4.1 Type D1 ISO mold and Type D2 ISO mold

Type D1 and Type D2 molds are double-cavity molds (see Figure 2) used for preparing 60mm x 60mm sheets. The products prepared using these molds...

The sheet material should conform to the dimensions shown in Figure 1.