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

GB/T 44305.2-2024

**Plastics - Plasticized poly(vinyl chloride) (PVC-P) moulding and
extrusion materials - Part 2: Preparation of test specimens and
determination of properties**

**塑料 增塑聚氯乙烯 (PVC-P) 模塑和挤塑材料 第2部分:试样制备和性能测定
(English Translation)**

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Table of Contents

- Preface
- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Sample preparation
 - 4.1 General Principles
 - 4.2 Material processing
 - 4.3 Compression molding
- 5 Sample state adjustment
- 6 Performance Measurement
- Appendix A (Normative) Sample Preparation
 - A.1 Principle
 - A.2 Preparation of mixed sheets
 - A.2.1 Instruments and Equipment
 - A.2.2 Mixing conditions
 - A.2.3 Mixing steps
 - A.3 Preparation of compression molded tablets
 - A.3.1 Instruments and Equipment
 - A.3.2 Compression molding conditions
 - A.3.3 Compression molding steps
 - A.4 Preparation of test specimens from compression molded sheets

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 is required.

This document is Part 2 of GB/T 44305 "Plastics - Plasticized polyvinyl chloride (PVC-P) moulding and extrusion materials".

GB/T 44305 has published the following parts.

Part 1: Naming system and basis for specification;

Part 2: Preparation of test specimens and determination of properties. -this document is modified to adopt ISO 24023-2:2020 "Plastics Plasticized polyvinyl chloride (PVC-P) molding and extrusion materials Part 2.

Specimen preparation and performance determination.

The technical differences between this document and ISO 24023-2:2020 and their reasons are as follows.

The scope (see Chapter 1) has been changed to clarify the standardization object and facilitate the application of this document;

The normative references GB/T 9352 replace ISO 293 (see 4.3), GB/T 39812 replace ISO 2818 (see 4.3), GB/T 2918 replaces ISO 291 (see Chapter 5). GB/T 1033.1 replaces ISO 1183-1 (see Chapter 6).

GB/T 1040.1 replaces ISO 527-1 (see Chapter 6), GB/T 1040.2 replaces ISO 527-2 (see Chapter 6), GB/T 2411 replaces ISO 868 (see Chapter 6). GB/T 9345.5 replaces ISO 3451-5 (see Chapter 6).

GB/T 31838.2 replaces IEC 62631-3-1 (see Chapter 6), GB/T 37426 replaces ISO 20753 (see Chapter 6), GB/T 44305.1 replaces ISO 24023-1 (see Chapter 6), HG/T 4458 replaces ISO 176 (see Chapter 6), which is in line with our National technical conditions to facilitate the application of this document;

The mixing conditions of materials before compression molding and the compression molding conditions of samples (see 4.3) have been changed to meet the technical requirements of my country;

The specimen condition adjustment (see Chapter 5) has been changed to match the condition adjustment time in the relevant material standards of my country;

The recommended dimensions of the two-roll mill for the preparation of mixed sheets (see A.2.1) have been changed to match the dimensions of the two-roll mill in the relevant Chinese standards.

Recommended size matches;

Change "Roller surface speed should be about 10 m/min" to "Front roller line speed recommended 8 m/min", and change "Stock volume should be such that the roller the ratio of the diameter of the material stored between the two rollers to the width of the roller gap is 10.1" was changed to "The amount of material stored between the two rollers during material mixing should ensure that the plastic uniformity", change "roller gap width should be about 1 mm" to "roller gap width should be 0.8 mm~1.2 mm" (see A.2.2), in line with my country's technical conditions and improve operability;

In the "Mixing step", change "After flake formation, continue mixing for 5 min" to "After flake formation, continue mixing for (5±1) min" (See A.2.3) to improve operability;

In the "Compression Molding Step", change "Close the preheated platens of the press and maintain a pressure of approximately 0.3 MPa for up to 5 min" to "Close the preheated platens of the press and maintain a pressure of approximately 0.3 MPa for up to 5 min".

Preheat the platens of the closing press and maintain a pressure of 0.3 MPa (recommended) for up to 8 min (if the material is very hard, preheating may be required).

longer time)", and "Cool the mold to about 40 °C (if the material is very soft, cool the mold to a lower temperature)" Change to "Cool the mold to 40°C (recommended, if the material is very soft, cool the mold to a lower temperature)" (see A.3.3), in line with my country's technical requirements;

The requirements for compression molded sheets in the compression molding step are added (see A.3.3). The requirements for compression molded sheets directly affect the preparation of the final test specimens.

It meets the technical requirements of our country.

The following editorial changes were made to this document.

In the "Mixing Conditions" section, change "The roller surface temperature and subsequent molding temperature should be selected according to the Shore hardness value of the material (see A.3.3)" is changed to "The roller surface temperature and subsequent molding temperature should be selected according to the Shore hardness value of the material (see 4.3)".

Introduction

GB/T 44305 "Plastics plasticized polyvinyl chloride (PVC-P) molding and extrusion materials" aims to establish a general application of plasticized polyvinyl chloride the guidelines for the nomenclature, specification, specimen preparation and property determination of (PVC-P) molding and extrusion materials are intended to consist of two parts.

Part 1: Naming system and basis for specification. The purpose is to establish the naming system for plasticized polyvinyl chloride (PVC-P) thermoplastic materials.

Differentiate between different types of plasticized PVC molding and extrusion materials.

Part 2: Preparation of test specimens and determination of properties. The purpose is to establish the nomenclature and specifications for plasticized polyvinyl chloride molding and extrusion materials.

Rules for specimen preparation, specimen conditioning and test conditions.

Plastic plasticized polyvinyl chloride (PVC-P) molding and Extruded materials Part 2:
Preparation and testing of test specimens Performance measurement

1 Scope

This document describes the methods for preparing specimens and determining properties of plasticized polyvinyl chloride (PVC-P) materials for molding and extrusion.

Requirements for test material pretreatment, test material pre-molding condition adjustment and specimen pre-test condition adjustment are given, and the specimen preparation steps and conditions are given.

and performance measurement steps.

This document lists the necessary properties and test methods suitable for characterizing PVC-P molding and extrusion materials selected from ISO 10350-1.

Other test methods widely used for molding and extrusion materials or of special significance to molding and extrusion materials and those named in GB/T 44305.1 Performance testing methods.

This document is applicable to plasticized compounds of vinyl chloride homopolymers and copolymers (containing at least 50% by mass of vinyl chloride);

Plasticized compounds for polyvinyl chloride; Plasticized compounds for blends containing one or more of the above polymers (the above polymers account for the mass fraction of the total amount of polymer in the plastic composite is at least 50%).

This document applies to powders (dry powders), granules or pellets that can be used normally, regardless of whether they are modified by colorants, additives, fillers, etc.

This document does not apply to foamed plastics or paste-like compounds (plastisols).

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.

in this document.

GB/T 1033.1 Plastics - Determination of density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (GB/T 1033.1-2008, ISO 1183-1:2004, IDT) GB/T 1040.1 Determination of tensile properties of plastics Part 1: General (GB/T 1040.1-2018, ISO 527-1.

2012, IDT)