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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 39937-2021

Plastics - Extruded sheets of polypropylene (PP) - Requirements and test methods

Issued on: March 9, 2021 **Implemented on: October 1, 2021**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this standard is equivalent to ISO 15013.2007 Requirements and Test Methods for Polypropylene (PP) Extruded Sheets for Plastic Products

law".

The Chinese documents that have a consistent correspondence relationship with the normatively cited international documents in this standard are as follows.

---GB/T 1040.2-2006 Determination of tensile properties of plastics Part 2.Test conditions for molding and extrusion plastics

(ISO 527-2.1993, IDT);

---GB/T 1043.1-2008 Determination of impact properties of plastic simply supported beams Part 1.Non-instrumented impact test

(ISO 179-1.2000, IDT);

---GB/T 1043.2-2018 Determination of impact properties of plastic simply supported beams Part 2.Instrumental impact test (ISO 179-

2.1997, IDT);

---GB/T 2546.1-2006 Plastic polypropylene (PP) molding and extrusion materials Part 1.Naming system and classification basis

(ISO 1873-1.1995,MOD);

---GB/T 2918-2018 Standard environment for condition adjustment and testing of plastic specimens (ISO 291.2008, MOD);

---GB/T 3682.1-2018 Plastic Thermoplastic Melt Mass Flow Rate (MFR) and Melt Volume Flow Rate

(MVR) Determination Part 1.Standard Method (ISO 1133-1.2011, MOD);

---GB/T 3682.2-2018 Plastic Thermoplastic Melt Mass Flow Rate (MFR) and Melt Volume Flow Rate

(MVR) Determination Part 2.Test methods for materials sensitive to time-temperature history and/or humidity (ISO 1133-2.

2011, MOD);

---GB/T 12027-2004 Plastic film and sheet heating dimensional change rate test method (ISO 11501.1995,

IDT).

This standard has made the following editorial changes.

---The introduction of Table A.1 in Appendix A has been added; the length and width in Table A.1 are listed in separate columns (see Appendix A).

1 Scope

This standard specifies the extrusion of polypropylene homopolymer (PP-H) and polypropylene copolymer (PP-B and PP-R) without fillers and reinforcing materials.

Performance requirements and test methods of plastic plates.

This standard applies to PP sheets with a thickness of 0.5mm~40mm, as well as sheets in the form of coils.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 179-1 Determination of impact properties of plastic simply supported beams Part 1.Non-instrumented impact test (Plastics-

DeterminationofCharpyimpactproperties-Part 1.Non-instrumentedimpacttest)

ISO 179-2 Determination of impact properties of plastic simply supported beams Part 2.Instrumented impact test (Plastics-Determination

ofCharpyimpactproperties-Part 2.Instrumentedimpacttest)

ISO 291 Standard environment for condition adjustment and testing of plastic specimens (Plastics-Standardatmospheresfor

conditioningandtesting)

ISO 527-2 Determination of tensile properties of plastics Part 2.Test conditions for molding and extrusion plastics (Plastics-Determi-

nationoftensileproperties-Part 2.Testconditionsformouldingandextrusionplastics)

ISO 1133 Plastics Thermoplastic Melt Mass Flow Rate (MFR) and Melt Volume Flow Rate (MVR) Determination

(Plastics-Determinationofthemeltmass-flowrate(MFR)andmeltvolume-flowrate(MVR)of

thermoplastics)

ISO 1873-1 Plastic Polypropylene (PP) Moulding and Extrusion Materials Part 1.Identification System and Specification Basis (Plastics-

Polypropylene(PP) mouldingandextrusionmaterials-Part 1.Designationsystemandbasisforspeci-

fications)

ISO 2818 Plastics-Preparation of test specifications by machining

ISO 4577 Plastics polypropylene and propylene copolymers-Determination of thermal oxidative stability in air-Oven method (Plastics-Poly-

propyleneandpropylene-copolymers-Determinationofthermaloxidativestabilityinair-Ovenmeth-

od)

ISO 11501 Plastic film and sheet heating dimensional change rate test method (Plastics-Filmandsheeting-Deter-

minationofdimensionalchangeonheating)

3 material

The sheet shall consist of an extruded PP mixture without filling or reinforcing materials as defined in ISO 1873-1.The extrusion mixture may contain

There are additives such as processing aids, stabilizers, flame retardants, impact modifiers and colorants. Plates should not use compounds of unknown composition or additives

Add agent.

Note. Select materials according to the requirements of relevant laws, regulations and national standards (see 4.3.3).

4.3.2.2 Maximum shrinkage for thermoforming applications

For sheets for thermoforming applications, under the conditions specified in Table 3, measure the maximum shrinkage in the extrusion direction according to 5.10, and the result should not exceed the table

The value given in 3.

Table 3 Maximum shrinkage for thermoforming applications

4.3.3 Hygienic performance

According to the requirements of relevant laws, regulations and national standards.

5.1.1 Sample preparation

The sample should be cut separately from the longitudinal direction (extrusion direction, the same below) and the transverse direction (perpendicular to the extrusion direction, the same below), and the cutting should be evenly distributed on the plate.

Take a sample. For plates in the form of coils, 2m should be taken from the end of the coil to prepare samples. There should be no damage on the surface of the specimen that can cause the notch effect.

Injuries and defects. During the preparation process, if there are burrs or flashes on the sample, they should be removed without damaging the surface of the sample. When needed,

Use sandpaper with a particle size of 220 or finer to smooth the length of the test sample. Samples with a thickness of more than 4.2mm are undergoing 5.5~

During the test in 5.7, one-sided processing shall be carried out in accordance with the requirements of ISO 2818 to make the thickness reach 4.0mm+/-0.2mm.