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

GB/T 37188.2-2018

**Plastics -- Acquisition and presentation of comparable
multipoint data -- Part 2: Thermal and processing properties**

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Foreword

GB/T 37188 "Plastic and comparable multipoint data acquisition and representation" is divided into the following three parts.

---Part 1. Mechanical properties;

--- Part 2. Thermal properties and processing properties;

--- Part 3. The impact of the environment on performance.

This part is the second part of GB/T 37188.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to ISO 11403-2:2012 "Plastic comparable multipoint data acquisition and representation Part 2. Hot

Performance and processability.

The documents of our country that have a consistent correspondence with the normatively cited international documents in this section are listed in Appendix NA.

This standard has made the following editorial changes.

--- Added informative Appendix NA.

This part was proposed by the China Petroleum and Chemical Industry Federation.

This part is under the jurisdiction of the National Plastics Standardization Technical Committee (SAC/TC15).

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Introduction

This section is based on the fact that plastic users find that they can not be used for similar material properties when comparing the performance of similar materials, especially when the data sources are different.

Can compare. Even when the same standard test method is used, the data obtained is not comparable because of the wide range of test conditions allowed.

Sex. The purpose of this section is to determine the specific methods and test conditions that can be obtained and represented as data, so that

Comparison of effectiveness.

ISO 10350 is a standard for single-point data. The representation of this data is the most basic method for characterizing material properties.

Very useful. The current version specifies test conditions, test procedures, and representations of more large amounts of data. Multi-point data for each performance

Characterization, they show the relationship of this performance with many variables (such as time, temperature, environmental impact, etc.). This section also includes other

Some performance. These data help to determine whether a material is suitable for a particular application. Some data can also be used to predict molding

The performance of the piece and the best processing conditions, although other data are needed from the design considerations, one of the reasons is the materiality

Can be greatly affected by its physical structure. The test in this section uses a multi-purpose tensile spline as much as possible, but the condensed state of the spline

The structure may be significantly different from the specific area of the actual molded article. Therefore, in this case, the data obtained does not apply to product performance.

Accurate design calculations, data suitability for specific performance should be consulted with the material supplier.

The various parts of GB/T 37188 and ISO 10350 together determine the acquisition and presentation of a set of core comparable data used in the selection of materials.

law. Using these standards can rationalize work while reducing the cost of acquiring data. In addition, reference to these standards also helps to simplify the material

Computer storage modeling and data interchange of material performance data.

This section appropriately specifies the variation of the test parameters, but for some tests, the range of test conditions corresponding to different plastic applications

It is very broad and gives guidelines for the selection of test conditions to ensure that the

test conditions cover the corresponding range of polymer applications. This

Because in general, the properties and specific properties of different polymers are very different, so there is no need to update this section one by one.

The data under the test conditions of the column.

In order to better materialize the plastic and apply it to a variety of applications, it is necessary to obtain a wide range of properties.

The experimental steps described in this section can help you get some relevant information about each performance. But as far as some performance is concerned, there is currently no

There are also significant deficiencies in establishing the corresponding standards or in this section, so it is difficult to obtain comparable data for these properties in accordance with this section (see appendix

A). This standard is divided into several parts, each part can be independently formed into chapters. In this way, when developing new standards or revisions of this standard, other properties can be

To include it.

Plastics are comparable to the acquisition and representation of multipoint data

Part 2. Thermal properties and processability

1 Scope

This part of GB/T 37188 describes the test steps for obtaining and representing multi-point data for the following thermal and processing properties of plastics.

---Hot ?-temperature curve;

---Linear expansion-temperature curve;

--- Melt shear viscosity - shear strain rate curve.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 291 plastics conditioning and testing using standard atmospheric conditions
(Plastics-Standardatmospheresforconditioning

And testing)

Plastic molded specimen of ISO 293 plastic thermoplastic
(Plastics-Compression moulding of test specimens of

Catalyst materials)

ISO 294-1 Plastics -- Injection moulding of thermoplastics - Part 1 . General and
multi-component injection moulding (Plastics-In-

jection moulding of test specimens of thermoplastic materials-Part

1.General principles, and mould-

ing of multi-purpose and bar test specimens)

ISO 295 plastic thermoset plastic specimen compression molding
(Plastics-Compression moulding of test specimens

of thermosetting materials)

Determination of melt mass flow rate (MFR) and melt volume flow rate (MVR) of ISO
1133-1 plastics thermoplastics

Part 1. Standard methods (Plastics-Determination of
the melt mass-flow rate (MFR) and the melt volume-

Flow rate (MVR) of thermoplastics-Part 1. Standard method)

ISO 1133-2 Determination of melt mass flow rate (MFR) and melt volume flow rate (MVR)
of plastics

Part 2. Methods for time-temperature history and moisture sensitive materials
(Plastics-Determination of the melt mass-

Flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics-Part 2. Method for mate-

rial sensitive to time-temperature history and/or moisture)

Preparation of ISO 2818 plastic machined samples (Plastics-Preparation of
test specimens by machining)

ISO 3167 Plastic Multi-Purpose Sample (Plastics-Multi-purpose test specimens)

Injection moulding of specimens of plastic thermosetting powder mouldings (PMCs) - Part 1
. General and multifunctional specimens

Molding (Plastics-Injection moulding of test specimens of thermosetting powder moulding com-

pounds (PMCs)-Part 1. General principles and moulding of multi-purpose test specimens)

Plastics - Differential Scanning Calorimetry (DSC) - Part 3. Determination of crystallization
and melting heat and temperature