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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 41927-2022

Plastics - Thermosetting moulding materials - Evaluation of short-term performance at elevated temperatures

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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.

This document is modified to adopt ISO 11248.1993 "Short-term performance evaluation of plastic thermosetting molding compounds at high temperature".

Compared with ISO 11248.1993, this document has made the following structural adjustments.

--- Added "Terms and Definitions" chapter.

The technical differences between this document and ISO 11248.1993 and their reasons are as follows.

---Replaced respectively with GB/T 9341-2008, GB/T 1040.1-2018 and GB/T 1041-2008 referenced normatively

ISO 178, ISO 527-1, ISO 604 (see 4.2, 8.1), in order to adapt to the technical conditions of our country and increase operability;

--- Replaced ISO 295 (see 6.3) with the normatively quoted GB/T 5471-2008 to adapt to my country's technical conditions and increase available

operability;

--- Replaced ISO 291 (see Chapter 7) with the normatively quoted GB/T 2918-2018 to adapt to my country's technical conditions, adding

Operability;

--- Replaced IEC 216-2 (see 8.1) with the normatively quoted GB/T 11026.2-2012 to adapt to the technical conditions of our country, adding

Increase operability;

--- Added the measurement standard GB/T 22567-2008 and GB/T 1634.2 for glass transition temperature and load deflection temperature

2019 (see 8.4), to clarify the test method.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the procedures for determining the mechanical, electrical, thermal and other properties of thermosetting molding compounds at elevated temperatures.

method. This method is used to determine the relative performance temperature (RPT) of thermoset molding compounds. RPT is useful for describing the short-term nature of materials at high temperatures

can be necessary. Combined with long-term performance evaluation of polymeric materials, RPT provides designers and engineers with a more complete understanding of the performance of materials used at high temperatures.

expected performance of the material.

This document applies to thermosetting molding compounds.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 1040.1-2018 Determination of tensile properties of plastics - Part 1.General principles (ISO 527-1.2012, IDT)

GB/T 1041-2008 Determination of compression properties of plastics (ISO 604.2002, IDT)

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

GB/T 5471-2008 Compression molding of plastic thermosetting plastic specimens (ISO 295.2004, IDT)

GB/T 9341-2008 Determination of bending properties of plastics (ISO 178.2001, IDT)

GB/T 1634.2-2019 Determination of deformation temperature of plastics under load - Part 2.Plastics and hard rubber (ISO 75-2.2013,

MOD)

GB/T 11026.2-2012 Heat resistance of electrical insulating materials - Part 2.Selection of test criteria (IEC 60216-2.

2005, IDT)

GB/T 22567-2008 Test method for glass transition temperature of electrical insulating materials (IEC 61006.2004, IDT)

ISO 10724-1 Plastics thermosetting powder molding compounds (PMCs) Injection molding test specimens Part 1.General principles and general purpose test specimens

ISO 10724-2 Plastic thermosetting powder molding compounds (PMCs) Injection molding test specimens Part 2.Small plates [Plastics-Injection

3 Terms and Definitions

This document does not have terms and definitions that need to be defined.

4.1 Oven

A forced-air oven with controlled horizontal or vertical airflow is recommended. Tubes can be used when it is necessary to avoid contamination between materials