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

GB/T 27797.7-2011

**Fibre-reinforced plastics -- Methods of producing test plates --
Part 7: Resin transfer moulding**

纤维增强塑料 试验板制备方法 第7部分：树脂传递模塑

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative reference documents
- 3 Healthy and safe
- 4 Principle

Foreword

GB/T 27797 "fiber reinforced plastic test plate preparation method" is divided into 11 parts.

- Part 1. General;
- Part 2. Contact and spray molding;
- Part 3. wet molding;
- Part 4. Prepreg molding;
- Part 5. winding forming;
- Part 6. Pultrusion;
- Part 7. Resin transfer molding;
- Part 8. SMC and BMC molding;
- Part 9. GMT/STC molding;
- Part 10. BMC and other long fiber molding compounds Injection molding general principles and general purpose molding;
- Part 11. BMC and other long fiber molding compounds injection molding small square.

This part is part 7 of GB/T 27797.

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

This part uses the translation method equivalent to ISO 1268-7.:2001 (E) "Fiber Reinforced Plastics Test Plate Preparation Method Part 7.

Resin transfer molding ".

In this part of the normative reference to the international documents have a consistent correspondence between the following documents.

GB/T 1033 (all parts) Determination of plastic non-foam density [ISO 1183 (all parts)];

Test method for glass fiber reinforced plastic resin content (ISO 1172.:1996, MOD); GB/T Plastics - Differential scanning calorimetry (DSC) - Part 2. Determination of glass transition temperature - GB/T 19466.2-2004 (ISO 11357-2.:1999, IDT);

Fiber reinforced plastics test boards - Part 1. General principles (ISO 1268-1.:2001, IDT)

GB/T this section makes the following editorial changes.

--- to some of the statements applied to international standards to apply to the formulation of our standards;

--- Add the bar in 5.1 and Chapter 7.

This section is proposed by the China Building Materials Federation.

This part of the National Fiber Reinforced Plastics Standardization Technical Committee (SAC/TC39) centralized.

This part of the drafting unit. Beijing glass steel composite materials Co., Ltd., China Ordnance Industry Group, five three research institutes, Changzhou Tianma Group Limited company.

1 Scope

This part of GB/T 27797 specifies a method for the preparation of reinforced plastic test panels by resin transfer molding (RTM).

This part of GB/T 27797 is used in conjunction with GB/T 27797.1.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this file. For undated references, the latest edition (including all modifications) applies to this document.

Plastics - Differential scanning calorimetry (DSC) - Part 2. Determination of glass transition temperature GB/T 19466.2-2004 (ISO 11357-2.:1999, IDT) ISO 1172.:1996 Textile glass fiber reinforced plastic prepregs, molding compounds and laminates Glass fiber and inorganic mineral fillers Determination of the amount of textile (Glass-glass-reinforcedplastics-Prepregs, mouldingcompoundsandlaminates-Determinationofthetextile-glassandmineralfillercontent-Calcinationmethods) ISO 1183 (all parts) Determination of plastic non-foam density (Plastics-Methodsfordetermining the density of non-celularplastics ISO 1268-1 fiber reinforced plastic test plate preparation method Part 1. General (Fibre-reinforcedplastics-Methodsofproducingtestplates-Part 1. Generalconditions) ISO 7822.:1990 Determination of pore content of woven glass fiber reinforced plastics - Loss of

ignition, mechanical crushing and statistical calculation
(Textile glass reinforced plastics-Determination of void content-Loss on ignition,
mechanical disintegration and statistical counting methods) ISO 11357-5.:1999 Plastics -
Differential scanning calorimetry (DSC) - Part 5. Determination of reaction characteristics -
Time -Reaction enthalpy and degree of conversion (Plastics-Differential scanning calorimetry
(DSC) -Part 5. Determination of characteristic reaction curve temperature and times,
enthalpy of reaction and degree of conversion)

3 Healthy and safe

See ISO 1268-1.

4 Principle

Resin transfer molding (RTM) is a method of low pressure forming in a closed container. The fiber-reinforced material can be preformed and reinforced. Placed in the mold cavity, mold. The resin is injected into the mold cavity to impregnate the reinforcing material, and the resin is cured to form a composite sheet. Production process adjustable the whole, such as injection of resin before the vacuum discharge air, heating resin to reduce viscosity and shorten the curing time. When using high active resin, use two the pumps are respectively taken from the resin and the curing agent into a container, mixed and then injected into the mold.