

ICS 83.120
CCS Q 23



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

GB/T 27797.5-2011

**Fibre-reinforced plastics -- Methods of producing test plates --
Part 5: Filament winding**

Issued on: December 30, 2011

Implemented on: August 1, 2012

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Foreword

1 Scope

2 normative reference documents

3 healthy and safe

4 principle

5 material

5.1 roving

5.2 resin system

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 5 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 1268-5..2001 (E) "Fiber Reinforced Plastics Test Plate Preparation Method Part 5.

Winding forming ".

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

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 8.5 and 9.

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 of preparing a fiber-reinforced plastic sheet by a winding method using a glass fiber roving and

Thermosetting resin as raw material (excluding pre-impregnated fibers).

This section specifies the preparation of unidirectional reinforcing plates under optimal industrial conditions, which can be cut on these test panels for testing various mechanical properties

Can sample.

This part of GB/T 27797 is mainly applicable to glass fiber reinforced plastics made of polyester resin or epoxy resin, but can also be expanded

To other types of resins and reinforcing materials.

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

Note. For ease of understanding of this method, the term "roving" is used throughout the text and includes yarn unless otherwise specified.

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 article

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

ISO 1268-1 fiber reinforced plastic test plate preparation method Part 1. General
(Fibre-reinforced plastics-
Methodsofproducingtestplates-Part 1. Generalconditions)

3 healthy and safe

See ISO 1268-1.

4 principle

A roving (or number of roving beams) is impregnated with resin, wrapped in several layers. Install the outer template on the mandrel to obtain the test plate

Find the final thickness. The curing may be carried out in a press with a heating plate or in an oven.

The method can simultaneously prepare two identical test boards.

5.1 roving

This method is suitable for all yarns with a linear density of.200 to 4800tex. The yarns with lower linear density can be combined to make their threads

The density is.200 to 4800tex (for example, 10 bundles 22tex is 220tex).

5.2 resin system

The recommended resin system (polyester or epoxy curing system) should meet the following properties.