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

GB/T 32788.2-2016

**Test method for properties of prepreg -- Part 2: Determination
for resin flow of prepreg**

预浸料性能试验方法 第2部分：树脂流动度的测定

(English Translation)

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Foreword

GB/T 32788 "Prepreg performance test method" is divided into six parts.

Part 1. Determination of gel time;

- Part 2. Determination of resin fluidity;

Part 3. Determination of volatile matter content;

- Part 4. Determination of tensile strength;

- Part 5. Determination of resin content;

Part 6. Determination of mass per unit area.

This part is part 2 of GB/T 32788.

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

This part uses the re-drafting method to modify ISO 15034.:1999 "Determination of the fluidity of composite prepregs".

This section has a greater structural adjustment compared to ISO 15034.:1999, which is listed in Appendix A and ISO 15034.:1999 of the chapter number of the control list.

The technical differences between this section and ISO 15034.:1999 are as follows.

This part of the scope of the expansion of the scope of use, with "thermosetting resin as the base of the prepreg resin fluidity determination";

--- replaced ISO 291.:1997 with GB/T 1446, removed ISO 472.:1999 and ISO 8604. 1988, increased GB/T 32788.3 Test method for the properties of prepregs - Part 3. Determination of volatile matter content;

- the deletion of the terms "terms and definitions";

- a cutting template with a size of (150 ± 1) mm x (150 ± 1) mm has been added to cut the test material (see 4.1);
- the "glazing glass cloth, type 181 or equivalent" is summarized as "rubber cloth" (see 4.4);
- increase the sampling position "at least 50mm from the edge" to clear the sampling position (see 5.1);
- Modification of the "state adjustment and test environment" requirements, in coordination with other parts of this standard (see Chapter 6);
- summarize the section "Making the sample assembly process" (see 7.5);
- the procedure for repeating the steps (at least 3 results) described in 8.1 to 8.8 for the remaining samples is removed from the test procedure;
- the deletion of the "according to ISO 9872" requirement, this part has been specified in the "normative reference document" - Added "Calculate arithmetic mean, take 3 significant digits.", In coordination with other parts of this standard (see 8.3).

This section makes the following editorial changes.

- Change the standard name to "Prepreg performance test method Part 2. Determination of resin fluidity";
- Added Appendix A (informative) "This section is in contrast to the chapter numbering of ISO 15034.:1999".

This section is proposed by the China Building Materials Federation.

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

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Test method for performance of prepregs Part 2. determination of resin fluidity

1 Scope

This part of GB/T 32788 specifies the principle, instrument and equipment, sample, test conditions, test procedure, Test results and test reports.

This part is suitable for the use of carbon fiber, glass fiber, aramid fiber as a reinforcing material, thermosetting resin-based prepreg resin flow Determination of the force.

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.

GB/T 1446 Fiber reinforced plastics - Test methods - General Test methods for performance of prepregs - Part 1. Determination of gel time GB/T Test methods for performance of prepregs - Part 3. Determination of volatiles content GB/T

3 Principle

Cutting the sample from the prepreg sample into the intermediate composition of the sintered glass cloth and the insulating film, placing the sample assembly in the specified test the temperature and pressure under the plate press for curing,, part of the resin flow out of the sample. The quality of the samples before and after the test Ratio, that is, the mobility of the resin.

4 Instruments and equipment

4.1

Cutting template. made of hard material such as steel or ceramic, specifications (100 ± 1) mm x (100 ± 1) mm, (150 ± 1) mm x (150 ± 1) mm each piece, the thickness of about 5mm.

4.2

Cutting Tools. Single-sided blade.

4.3

Analysis of balance. sense of 0.001g.

4.4

Glue glass cloth.

4.5

porous heat-resistant insulation film. such as. containing the appropriate pore structure of the tetrafluoroethylene film, resin can flow smoothly through the hole.

4.6

non-porous heat-resistant insulation film. such as. tetrafluoroethylene and hexafluoropropylene copolymer.

4.7

Flat press. the maximum temperature of.200 °C, and can be 100mm x 100mm area to maintain the pressure of 600kPa.

5 Samples

5.1

Using a cutting template and cutting tool, a sample of 100 mm x 100 mm was cut in the width of the prepreg, and a sufficient number and stack them together to obtain a sample of about 0.2 mm to 0.5 mm thick. If the width of the prepreg can not be cut enough in advance the impregnation sample (such as a narrowing of the prepreg) can be cut in the length of the prepreg, at least 50 mm from the edge.