

ICS 83.120
CCS Q 23



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

GB/T 32788.5-2016

**Test method for properties of prepreg -- Part 5: Determination of
resin content**

预浸料性能试验方法 第5部分：树脂含量的测定

(English Translation)

Issued on: June 14, 2016

Implemented on: May 1, 2017

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

Table of Contents

Foreword
1 Scope
2 Normative reference documents
3 Principle
3.1 Extraction method
3.2 Dissolution method
3.3 Burning method
4 Test conditions
4.1 Test environment
4.2 State adjustment

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 5 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 11667.:1997 "fiber reinforced molding compound molding and prepreg resin, Determination of dissolution of strong fibers and mineral fillings".

This section has a greater structural adjustment compared to ISO 11667.:1997, which is listed in Appendix A and ISO 11667.:1997 of the chapter number of the control list.

The technical differences between this part and ISO 11667.:1997 are as follows.

This part of the scope of the expansion of the scope of application, not to limit the molding compound, the "standard provisions of the two methods to determine the dissolution of

molding materials and Impregnated resin, reinforced fiber and mineral filler content.

"Modified as" This part applies to carbon fiber, glass fiber, aramid fiber and the like is used as a reinforcing material, and the content of the prepreg resin based on the thermosetting resin is measured. ";

--- Replace ISO 291.:1997 with GB/T 1446, ISO 472. 1988 and ISO 4793. 1980;

- the definition of "definition" was deleted;

--- increase the "burning method" principle;

- the addition of the "test conditions" chapter, in coordination with the rest of the standard (see Chapter 4);

--- Change the contents of "Sampling" to the "Samples" section (see 5.2, 6.2);

Replace the "reagent" with "and then add the right amount of solvent, such as acetone, dichloromethane, methyl ethyl ketone and industrial alcohol or prepreg technical conditions Prescribed solvent. (See 5.3.3, 6.3.6);

--- The formula for the content of the prepreg to enhance the fiber content and the prepreg resin content is edited and sorted (see 5.4.2, 6.4.1);

--- Added "burning method" to determine the glass fiber prepreg resin content of the chapter, according to GB/T 2577-2005 "glass fiber Reinforced plastic resin content test method ", delete the contents of this part has nothing to do with the increase in the provisions of the sampling, an increase of the pre-the formula for the impregnated fiber content (see Chapter 7);

--- The contents of the mineral filler are deleted and the contents are not related to this part.

This section makes the following editorial changes.

- Change the standard name to "Prepreg performance test method Part 5. Determination of resin content";

- Added Appendix A (informative) "This section is in contrast to chapter 11 of ISO 11667.:1997." 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 is responsible for the drafting unit. Harbin FRP Research Institute.

This part participates in the drafting unit. AVIC Composite Material Co., Ltd., Hebei Haozheng Non-metallic Material Testing Service Co., Ltd., Lei Ke Germany (polymer) Tianjin Co., Ltd., Jiangsu Hengshen Co., Ltd., Qihe County, Xingda Composite Materials Co., Ltd.

This part of the main drafters. Sun Yuanjun, Wang Baorui, Ding Xinjing, Ren Kun, Li

Jinliang, Liu Dongxun, Zhang Rongqi, Yu Hao, Li Hongjiang, He Tao.

Test method for performance of prepregs Part 5. determination of resin content

1 Scope

This part of GB/T 32788 specifies the extraction method, dissolution method, burning principle, test conditions, instrumentation and equipment, samples, test procedures, test results and test reports.

This part is suitable for carbon fiber, glass fiber, aramid fiber as a reinforcing material, thermosetting resin as the base of the prepreg resin Quantitative determination.

The burning method is only applicable to prepregs with glass fiber as a reinforcing material.

The extraction and dissolution methods are not suitable for the prepregs that can be dissolved in the solvent, or the resin matrix can not be completely dissolved in the solvent Leaching.

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

3.1 Extraction method

The sample is placed in a Soxhlet extractor and extracted with a suitable solvent to completely dissolve the resin in the prepreg. Relative to the initial quality Quantity, mass loss of sample.

3.2 Dissolution method

The sample was placed in a beaker containing a solvent and thoroughly washed to completely dissolve the resin in the prepreg. Relative to the initial mass, sample quality Percentage of loss.

3.3 Burning method

Place the sample in a muffle furnace and heat it to the specified temperature and time. Relative to the initial mass, the percentage of sample mass loss.

4.1 Test environment

The test environment shall comply with the relevant provisions of GB/T 1446.

4.2 State adjustment

4.2.1

The following conditions do not require state adjustment of the prepreg.