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

GB/T 1040.5-2008

**Plastics -- Determination of tensile properties -- Part 5: Test
conditions for unidirectional fibre-reinforced plastic
composites**

塑料 拉伸性能的测定 第5部分：单向纤维增强复合材料的试验条件

(English Translation)

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Foreword

GB/T 1040 "Determination of tensile properties of plastics" is divided into five parts.

- Part 1. General;
- Part 2. Test plastics molding and extrusion conditions;
- Part 3. Test conditions for films and sheets;
- Part 4. isotropic and orthotropic fiber-reinforced composite material of the test conditions;
- Part 5. Test conditions for unidirectional fiber reinforced composites.

This section GB/T 1040 Part 5, ISO 527-5 identical with. Determination of "Tensile Properties of Plastics --- 1997 --- 5 Part I. Test conditions for unidirectional fiber reinforced composites. " for ease of use, this section made the following editorial changes.

- To the "international standards" be replaced by the "Standard" or "GB/T 1040", the "this part of ISO 527" to "GB/T 1040 this part of "or" this part ";
 - Increasing the foreword of national standards in this section;
 - National Standards of the "Normative references" in which the two international standards stated in a chapter with the corresponding equivalent to using the file instead;
 - Use of the decimal point "." Instead of the international standard of the decimal point "."
- Appendix A of this section is normative appendix, Appendix B is an informative annex.

This part is proposed by the China Petroleum and Chemical Industry Association.

This part of the National Standardization Technical Committee of plastic products and plastic resins General Methods Chapter (SAC/TC15/SC4) centralized.

This section is responsible for drafting. National Quality Supervision and Inspection Center of synthetic resin.

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1 Scope

This section 1.1 GB/T 1040 in Part 1, based on the provisions of the unidirectional fiber reinforced composite material tensile properties test conditions.

1.2

See GB/T 1040.1-2006 of 1.2.

1.3

section applies to unidirectional fiber-reinforced, and meet GB/T 1040 this part of the test requirements (including failure mode) all poly Composites thereof.

This section applies to a composite material with a thermoplastic material or thermoset materials, including prepregs (prepregs). Involved Reinforcing material comprises carbon fiber, glass fiber, aramide fiber, or other similar fibers. Related to the geometry of the reinforcing material, including single to (ie, fully in a straight line) fiber, roving and unidirectional fabrics and narrow fabrics.

This section does not apply to a composite of several unidirectional laminates in different angles multidirectional composites (see GB/T 1040.4-2006).

1.4

part should use two different types of samples in a sample depends on the type of stress applied to the fiber direction related to the direction of (See Chapter 6).

1.5

See GB/T 1040.1-2006 of 1.5.

2 Normative references

The following documents contain provisions which, through reference to GB/T 1040 to the present, constitute provisions of this section. For dated references Documents, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encourage the present section Research on the parties to reach an agreement to use the latest versions of these documents. For undated references, the

latest edition of in this section.

GB /1040.1-2006 Plastics Determination of tensile properties T Part 1. General (ISO 527-1:1993, IDT) GB /1040.4-2006 Plastics - Part 4 Determination of tensile properties T. isotropic and orthotropic fiber-reinforced complex Composite material test conditions (ISO 527-4:1997, IDT) ISO 1268. Preparation of a resin adhesive low pressure laminate 1974 glass fiber reinforced plastics test ISO 2818:1994 Plastics samples were prepared by mechanical processing methods ISO 3534-1:1993 Statistics - Vocabulary and symbols - Part 1. Probability and general statistical terms ISO 9291:1996 Textile glass fiber reinforced plastic roving winding unidirectional sheet prepared Principle 3 See GB/T 1040.1-2006 in Chapter 3.

4 Terms and Definitions

The following terms and definitions apply GB/T 1040 this part.

See GB/T 1040.1-2006 in 4.1.

GB/T 1040.5-2008/ISO 527-5:1997