

ICS 83.120

CCS Q 23



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

GB/T 8237-2025

Replacing GB/T 8237-2005

Liquid unsaturated polyester resin for fiber reinforced plastics

纤维增强塑料用液体不饱和聚酯树脂

Issued on: June 30, 2025

Implemented on: January 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Classification and labeling	2
5 Requirement	2
6 Test Method	4
7 Inspection Rules	6
8 Marking, packaging, transportation and storage	7
Appendix A (Normative) Thixotropic Index Test Method.....	8
Reference	10

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 8237-2005 "Liquid unsaturated polyester resins for fiber reinforced plastics" and is consistent with GB/T 8237-2005.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The definitions of the terms "liquid unsaturated polyester resin" and "casting" have been changed, and the term "thixotropic index" has been added (see Chapter 3, 2005 Chapter 3 of the 2011 edition);
- b) The resin classification was changed from flame retardant resin to flame retardant resin; the general IG type resin was changed to GI type; and the general GH type resin (see 4.1, Chapter 4 of the 2005 edition);
- c) Added marking (see 4.2);
- d) Changed the appearance requirements for liquid unsaturated polyester resin (see 5.1, Table 2 of the 2005 edition);
- e) Added moisture performance requirements and test methods for resins used in molding processes (see 5.1 and 6.1.2);

f) Added the thixotropic index performance requirements and test methods for thixotropic resins (see 5.1 and Appendix A);

g) Added tensile property requirements and test methods for resin castings and fiber reinforced plastics (see 5.2, 5.3 and 6.2.4, 6.3.3);

h) Modified the bending performance requirements of resin castings and fiber reinforced plastics, and added general GH type resin castings and fiber reinforced plastics.

Performance requirements for strong plastics (see 5.2 and 5.3, Tables 3 and 4 of the 2005 edition);

i) The flame retardant performance requirements for flame retardant resin castings have been changed, and the oxygen index is used to characterize flame retardancy (see Table 3 of 5.2, 2005 edition);

j) Added oxygen index performance requirements and test methods for flame retardant resin fiber reinforced plastics (see 5.3 and 6.3.2);

k) The method for preparing casting specimens has been changed (see 6.2.1, 6.2.1 of the 2005 edition);

l) The provisions on sampling and determination of inspection results have been modified (see 7.2.1.2, 7.2.2.3, Chapter 7 of the 2005 edition);

m) The provisions on the shelf life of resins have been modified (see 8.6, 8.6 of the 2005 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed by China Building Materials Federation.

This document is under the jurisdiction of the National Technical Committee for Standardization of Fiber Reinforced Plastics (SAC/T 39).

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This document was first issued in 1987, revised for the first time in 2005, and this is the second revision.

1 Scope

This document specifies the requirements for liquid unsaturated polyester resins for use in fibre-reinforced plastics and describes the corresponding test methods.

This document applies to the production and test.

2 Normative references

GB/T 1446

GB/T 1447

GB/T 1449

GB/T 1634.2-2019

GB/T 2406.2

GB/T 2567

GB/T 2577

GB/T 2895

GB/T 3854

GB/T 6283

GB/T 7193

GB/T 8924

GB 15258

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Thermosetting resin obtained

Unsaturated polyesters produced by polycondensation of polyols and polyacids (or anhydrides) are dissolved in monomers that can undergo cross-linking reactions with them.

3.2 Thixotropic index

At a certain temperature, the ratio of the viscosity of liquid unsaturated polyester resin at two specific shear rates.

3.3 resincastingbody

A cured resin matrix without any reinforcement.

[Source. GB/T 3961-2009, 3.3.12, modified]

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