

ICS 83.120
CCS Q23



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

GB/T 15928-2008

Replacing GB/T 15928-1995

**Reinforced plastics based on unsaturated polyester resins -
Determination of residual styrene monomer content**

不饱和聚酯树脂基增强塑料中残留苯乙烯单体含量的测定

Issued on: June 30, 2008

Implemented on: April 1, 2009

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

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Foreword

This standard replaces GB/T 15928-1995 "unsaturated polyester resin reinforced plastic residual styrene monomer content determination." This standard and GB/T 15928-1995 compared to the main changes are as follows:

- Increased capillary gas chromatography (see Chapter 5);
- Remove the packed column preparation conditions (GB/T 15928-1995 of 4.6). The standard proposed by China Building Materials Federation. This standard by the national fiber-reinforced plastic Standardization Technical Committee. This standard by Shanghai FRP Research Institute is responsible for drafting. The main drafters of this standard. Zhong Lin Wang, Zhang Xiaoping. This standard was first released in December 1995, this is the first revision. Unsaturated polyester resin matrix reinforced plastics Determination of residual styrene monomer content

1 Scope

GB/T 15928-2008 is the Chinese national standard on reinforced plastics based on unsaturated polyester resins - determination of residual styrene monomer content, in the field of rubber and plastic industries. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 April 2009. Classification: ICS 83.120, CCS Q23. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the gas chromatographic determination of the cured unsaturated

polyester resin reinforced plastics and castings containing residual styrene monomer
Method quantity. This standard applies to the unsaturated polyester resin reinforced plastics
Determination of residual styrene monomer content of the unsaturated polyester resin
casting body.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1446-2005 fiber reinforced plastics General performance test method Plastic resin content test method

GB/T 2577 glass fiber reinforced Principle

3 With methylene chloride from the cured unsaturated polyester resin extracted styrene and styrene content was measured by gas chromatography.

4 Reagents

4.1 dichloromethane. AR.

4.2 methanol. AR.

4.3 n-butyl benzene. chromatography.

4.4 Styrene. AR, freshly distilled, stored at 0 °C and set aside. Styrene and mixed with an equal volume of methanol should produce transparent Solution.

4.5 nitrogen, hydrogen and air. purity of 99.999%, used GC carrier gas and fuel gas.

5.1 Gas Chromatograph

5.1.1 Column Packed and capillary columns can be recommended wall coating open tubular capillary column.

5.1.2 Detector Use hydrogen flame ionization detector (FID), terephthalic sensitivity higher than 1×10^{-10} g.

5.1.3 Injector You can use liquid sample injector. If using capillary column may be used with a split injector.

5.1.4 Data Processor Using a recorder or a microcomputer with a data processor recording process signals from the detector.

5.1.5 microinjector Capacity (1 ~ 5) μL .

5.2 Analytical Balance A sense of the amount of 0.0001g.

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