

ICS 83.080.10

CCS G 32



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

GB/T 4618-1984

Replacing GB/T 4613-1984

**Plastics -- Epoxy resins -- Determination of chlorine content --
Part 1: Inorganic chlorine
(English Translation)**

Issued on: September 4, 2008

Implemented on: April 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
5 Reagents
5.1 Acetone
5.2 Isopropanol
5.3 Glacial acetic acid

Foreword

GB/T 4618 "Plastics - Determination of chlorine content epoxy resin" is divided into three parts.

- Part 1. Inorganic chlorine;
- Part 2. Easily saponifiable chlorine;
- Part 3. Total chlorine.

This section GB/T 4618 Part 1, identical with ISO 21627-1:2002 "Plastics --- --- chlorine content of an epoxy resin Determination --- Part 1. Inorganic chlorine "(in English).

This section is equivalent translation ISO 21627-1:2002, identical in technical content.

For ease of use, this section do the following Edit modifications.

- a) The "ISO 21627:2002 in this part" to "GB/T 4618 this part" or "this part";
- b) Delete the ISO 21627-1:2002 Foreword;
- c) increase the foreword to the national standard of this Part;
- d) For ISO 21627-1:2002 and other international standards referenced in our country is equivalent to using the standard, this section with a quote me National Standards corresponding to international standards in place, the rest is not tantamount to the adoption of a standard international standards in this section are Referred to directly;
- e) use of decimal notation. "" instead of the international standard decimal symbol "."
- f) the precision of the relevant Chapter 9 content into information appendix NA "ISO 21627-1:2002 precision" in.

This Part replaces GB/T 4613-1984 "resins and glycidyl esters - Determination of inorganic chlorine." Section compared with GB/T 4613-1984 The main changes are as follows.

- Change the standard name, increasing the foreword;
- Increasing the normative references;
- Increasing the terms and definitions;
- Reagent butanone replaced by acetone;
- Standard solution 0.002mol/L 0.01N silver nitrate solution consisting of isopropyl alcohol or an aqueous solution of silver nitrate into 0.002N;
- Reference reagent sodium sulfate into a temperature from 120 °C 500 °C ~ 600 °C;
- Sample weight change by the 3g ~ 10g 10g;
- Increase the finish explaining the determination;
- Increased requirements result of rounding.

Appendix NA This section is informative appendix.

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

This part of the National Plastics Standardization Technical Committee (SAC/TC15) centralized.

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

Participated in the drafting of this section. Bluestar New Chemical Materials Co., Ltd. Wuxi Resin Factory, Anhui Hengyuan Chemical Co., Ltd.

1 Scope

GB/T 4618 provisions of this part of the use of epoxy resin titrator direct determination of inorganic chlorine (chlorine ion) method.

Inorganic chlorine content expressed in kilograms per milligram epoxy.

2 Normative references

The following documents contain provisions which, through reference to GB/T 4618 to the present, constitute provisions of this section. For dated references, all subsequent amendments (excluding corrections) or revisions do not apply to this section, however, encourage an agreement under this section Parties to study the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

ISO 3696. 1987 specifications and test methods of laboratory water analysis ISO

5725-2:1994 Accuracy of measurement methods and results (trueness and precision) ---
Part 2. Determine the standard measurement method Repeatability and reproducibility of
the basic method

3 Terms and Definitions

The following terms and definitions apply GB/T 4618 of this section.

It is present in the resin in the Cl^- , also known as chlorine ions.

Principle 4

Sample is dissolved in a suitable solvent, for example, potentiometric titration with standard silver nitrate solution to determine the inorganic chlorine.

5 Reagents

Except as otherwise provided in this section, the purity of the reagents used should be more analytical, test water shall comply with ISO 3696. 1987 in three or Above water specifications.

5.1 Acetone

Note: In some cases, may not dissolve the resin in acetone. In this case, butanone (methyl ethyl ketone) or THF (tetrahydrofuran) or other suitable solvent Agent, and described in the test report.

5.3 Glacial acetic acid

5.4 isopropanol solution of silver nitrate. 0.002mol/L.

5.4.1 Preparation

17g of silver nitrate was dissolved in water and diluted to 1L (0.1mol/L). Take 0.1mol/L aqueous solution of silver nitrate into 20mL 1L volumetric flask, dilute to the mark with isopropanol (5.2).

5.4.2 Calibration

Previously weighed in the dry base 500 °C ~ 600 °C sodium chloride 115mg ~ 120mg, accurate to 0.1mg, dissolved in 1L of water.

GB/T 4618.1-2008/ISO 21627-1:2002