

ICS 83.080.20

CCS G 32



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

GB/T 21993-2008

Replacing GB/T 13453.2-1992

**Polyvinyl chloride resins -- Determination of the content of
methanol or ethanol extract**

聚氯乙烯树脂 甲醇或乙醇萃取物含量的测定

(English Translation)

Issued on: June 4, 2008

Implemented on: December 1, 2008

Issued by: Standardization Administration of China

Table of Contents

Foreword

1 Scope

3 Reagents

3.1 Methanol

3.2 Ethanol (anhydrous)

4 Instrument

5 Steps

6 Calculation

Foreword

This standard corresponds to ASTM D2222-1994 (2004 Confirmation) "Standard Test Method for vinyl chloride resin the methanol extract", and Degree of consistency ASTM D2222-1994 of non-equivalent.

The main technical differences between this standard and ASTM D2222-1994 as follows.

- Methanol harmful to human health, thus increasing the ethanol extraction agent;
- Remove the "reference standard" chapter;
- Remove the "Terminology" section.

This standard replaces GB/T 13453.2-1992 "Determination of polyvinyl chloride, methanol or ethanol extract of the resin content." this standard and GB/T 13453.2-1992 The main differences are as follows.

- Standard format and structure according to GB/T 1.1-2000 requested to prepare.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee of plastic PVC resin product Club (SAC/TC15/SC7) centralized.

This standard was drafted. Jinxi Chemical Industry Research Institute.

1 Scope

This standard specifies the method of methanol or ethanol extracts Determination of polyvinyl chloride resin with a Soxhlet extractor.

This standard applies to the determination of polyvinyl chloride resin, methanol or ethanol

extract.

Principle 2

Soxhlet extractor, soluble in methanol or ethanol, a substance extracted from the resin, methanol or ethanol evaporated after weighing the residue mass calculated mass percentage of ethanol or methanol extract.

3 Reagents

Unless otherwise indicated in the analysis using only recognized as analytical reagents.

3.2 Ethanol (anhydrous)

Warning --- methanol and ethanol (anhydrous) as hazardous chemical agents, the user's responsibility to take appropriate safety and health practices.

4 Instrument

4.1

Soxhlet extractor, with a capacity of 100mL and 250mL single-necked flask.

4.2

extraction tube, 33mm x 94mm perforated bottom of a glass cylinder with or without loss of the sample filter cartridge.

4.3

oven can be controlled at $(105 \pm 3) ^\circ\text{C}$.

4.4

electric heating mantle or strip heater, heating rate can be controlled.

4.5

Balance, accurate to 0.001g.

5 Steps

5.1

weighing about 12g sample was extracted to an empty cylinder, accurate to 0.001g. With cotton wool (or wool) mission will cover a sample extraction cartridge Live, placed in the extractor.

5.2

plus two clean sheets in various porcelain flask washed and dried to weighing, accurate to 0.001g.

200mL of methanol was added 5.3 (3.1) or ethanol (3.2) in a flask, and the flask was connected to the extractor after pushed onto the electric heater.

5.4

Start reflux extraction and adjust the speed of the extraction tube so as methanol or ethanol collected is discharged at least six times per hour.

5.5

Since the extractor extracts the first discharge start timing extraction to $6\text{h} \pm 10\text{min}$ (or otherwise agreed).

5.6

in the extractor is methanol or ethanol and poured into a flask, and the flask was connected to a distillation apparatus for distillation, the flask was evaporated to approximately 5mL remaining Methanol or ethanol.

5.7

The flask was heated in an oven at $(105 \pm 3) ^\circ\text{C}$ for about 2h after removing cool to room temperature in a desiccator and weigh to the nearest 0.001g. Heated again until two quality values within 30min at intervals not exceeding 0.001g difference is a constant weight, with this value Calculate the percentage of methanol or ethanol extract quality.

5.8

without the sample, a blank test in the same operation.

6 Calculation

6.1

methanol or ethanol extracts of mass fraction ω , expressed in%, according to equation (1).