TC 61

INTERNATIONAL STANDARD ISO 4573

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Plastics — Epoxide resins and glycidyl esters — Determination of inorganic chlorine

Plastiques — Résines d'époxydes et esters glycidiques — Dosage du chlore inorganique

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4573 was developed by Technical Committee ISO/TC 61, *Plastics*, and was circulated to the member bodies in December 1976.

It has been approved by the member bodies of the following countries:

Austria	India	Poland
Belgium	Iran	Portugal
Brazil	Israel	Romania
Canada	Italy	Switzerland
Czechoslovakia	Korea, Rep. of	Turkey
Finland	Mexico	United Kingdom
France	Netherlands	U.S.S.R.
Germany, F.R.	New Zealand	Yugoslavia

No member body expressed disapproval of the document.

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Plastics — Epoxide resins and glycidyl esters — Determination of inorganic chlorine

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a direct potentiometric method for the determination of inorganic substances in epoxide resins and glycidyl esters, called also "inorganic chlorine" or "ionic chlorine".

2 REFERENCE

ISO 3696, *Water for laboratory use — Specifications.*[1)]

3 PRINCIPLE

Dissolution of a test portion in a suitable solvent. Determination of the chloride ion by potentiometric titration with a standard volumetric silver nitrate solution.

4 REAGENTS

During the analysis, use only reagents of recognized analytical grade and only grade 1 water conforming to ISO 3696.

4.1 Acetic acid, glacial, ρ 1,05 g/ml.

4.2 Butanone (methyl ethyl ketone).

NOTE — In some cases, butanone does not dissolve the resin; another, more suitable solvent should then be used, and mentioned in the test report.

4.3 Hydrochloric acid, 0,1 N solution.

4.4 Potassium chloride, 0,01 N solution.

4.5 Silver nitrate, 0,01 N standard volumetric solution.

4.5.1 *Preparation*

Dissolve 1,70 g of silver nitrate in water and dilute to 1 litre.

4.5.2 *Standardization*

Weigh, to the nearest 0,1 mg, 20 to 25 mg of sodium chloride, previously dried at 120 °C. Transfer to a 300 ml conical flask, and dissolve in 50 ml of water. Titrate with the silver nitrate solution (4.5.1) in accordance with 7.3.

4.5.3 *Calculation of concentration*

The concentration T, expressed as normality, is given by the formula

$$T = \frac{m}{58{,}45\ V}$$

where

m is the mass, in milligrams, of sodium chloride used;

V is the volume, in millilitres, of the silver nitrate solution (4.5.1) used in the titration.

5 APPARATUS

Usual laboratory apparatus, and

5.1 Microburette, 10 ml capacity, graduated in 0,02 ml; length of delivery tube approximately 120 mm.

5.2 Magnetic stirrer.

5.3 pH-millivoltmeter, with glass and silver electrodes and titration stand.

1) At present at the stage of draft.