INTERNATIONAL STANDARD 1624

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Plastics — Vinyl chloride homopolymer and copolymer resins — Sieve analysis in water

Plastiques — Résines d'homopolymères et de copolymères de chlorure de vinyle — Analyse granulométrique par tamisage sous courant d'eau

First edition — 1978-09-01

UDC 678.743-13 : 621.928

Ref. No. ISO 1624-1978 (E)

Descriptors : plastics, homopolymers, copolymers, vinyl chloride, grain size analysis, sieve analysis.

Price based on 4 pages

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 1624 was developed by Technical Committee ISO/TC 61, *Plastics*.

It was submitted directly to the ISO Council, in accordance with clause 6.13.1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 1624-1970, which had been approved by the member bodies of the following countries :

Austria	Italy	Sweden
Belgium	Japan	Switzerland
Czechoslovakia	Netherlands	Turkey
Egypt, Arab Rep. of	Poland	United Kingdom
Hungary	Portugal	U.S.A.
India	Romania	U.S.S.R.
Iran	South Africa, Rep. of	
Israel	Spain	

The member bodies of the following countries had expressed disapproval of the document on technical grounds :

France
Germany

Printed in Switzerland

Plastics — Vinyl chloride homopolymer and copolymer resins — Sieve analysis in water

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of particle size of vinyl chloride homopolymer and copolymer resins by sieve analysis in water.

2 PRINCIPLE

Sieving under a stream of water, using standard aperture sieves[1].

3 REAGENT

Wetting agent, for example 5 to 10 % solution of sodium alkylsulphonate.

4 APPARATUS

4.1 Series of two sieves, diameter 200 to 300 mm, height 30 to 50 mm, having mesh sizes[2] 0,063 and 0,250 mm, and fitted with deflectors to prevent loss by spray of sample. (See the figure.)

4.2 Balance, accurate to ± 0,1 g, range and size sufficient to accommodate the sieves and the filtered resin. [See 5.1 b).]

4.3 Oven, capable of being controlled at 80 ± 2 °C.

4.4 Filter, placed between the supply tap and the apparatus, and intended to exclude impurities in the water supply.

4.5 Sprinkling device, for one or, better, several sieves, designed so that

— the mesh and inside walls of the sieve are thoroughly sprinkled over their entire surface;

— the resin is agitated by the jets, for example by using jet apertures inclined to the screen of the sieve;

— the inclination of the jets is such as to prevent track formation in the resin, for example by crossing of jet directions;

— the sprayed water immediately goes through the screen and no bulk accumulation of water occurs on it during the sieving of resins.

The screening water should finally pass into a dark coloured vessel to check for the absence of resin particles in the water.

The figure shows a schematic apparatus including a rotating sprinkling device for several sieves, and is given as an example meeting the requirements of this International Standard.

4.6 Filter funnel or **filter crucible** with adaptor, 40 mm diameter and pore size 20 to 40 µm mean diameter.

5 PROCEDURE

5.1 Preliminary remark

This International Standard permits several variations, namely :

a) It is possible either

— to conduct a single test using two superimposed screens, provided that a sprinkler device is fitted to each sieve (see the figure) (recommended method), or

— to carry out two tests on two separate test portions, using a different sieve each time.

b) It is possible to dry the residue either

— in a filter funnel or in a filter crucible (recommended method), or

— directly on the sieve. *This method requires the sieves to be resistant to repeated heating and cooling* (for example, they should be constructed from stainless steel).

1) Sieving under a stream of water gives truer results than a dry sieving method in which static electricity interfers. This method is particularly suited to emulsion resins.

2) Other mesh sizes may be used provided that

— the prescribed sieves are also used;

— new sieves are chosen from the series provided in ISO 565.