INTERNATIONAL STANDARD

ISO 4576

Second edition
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Plastics — Polymer dispersions — Determination of sieve residue (gross particle and coagulum content)

Plastiques — Dispersions de polymères — Détermination du résidu par tamisage (teneur en grains et en coagulum)

Reference number
ISO 4576:1996(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4576 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials.*

This second edition cancels and replaces the first edition (ISO 4576:1978), which has been technically revised.

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Plastics — Polymer dispersions — Determination of sieve residue (gross particle and coagulum content)

1 Scope

This International Standard specifies a method of determining the sieve residue (gross particle and coagulum content) of polymer dispersions, i.e. of particles much greater in diameter (for example 10 or 100 times) than the mean diameter of the other particles.

This determination is carried out by sieve analysis. The sieves used depend on the type of dispersion under test and are in consequence to be specified, or agreed upon by the interested parties, for each dispersion or group of closely related dispersions.

This International Standard refers only to coagulum-type content. Skinned material and fragments of skin larger than 5 mm are avoided while taking the sample (see clause 6)

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 123:1985, *Rubber latex — Sampling.*

ISO 842:1984, *Raw materials for paints and varnishes — Sampling.*

ISO 3310-1:1990, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth.*

3 Principle

The polymer dispersion is diluted with a specified volume of deionized water and filtered through a metal gauze of a specified mesh size. The residue is washed with deionized water and then dried and weighed.

4 Reagents

During the analysis, use only reagents of recognized analytical grade, and deionized water or water of equivalent purity.

4.1 Surfactants, for stabilizing the polymer dispersion during testing (if necessary), as agreed between the interested parties.

5 Apparatus

5.1 Test sieves (series of metal gauzes, preferably stainless steel), as specified in ISO 3310-1, in the form of discs or squares, including at least meshes with the following aperture sizes:

45 μm, 63 μm, 90 μm, 125 μm and 180 μm

Non-metallic gauzes may be used, but this shall be indicated in the test report.

5.2 Equipment to support the wire gauzes, such as steel rings or glass funnels of equal internal diameter between 25 mm and 50 mm.