International Standard 7143

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Binders for paints and varnishes — Aqueous dispersions of polymers and copolymers — General methods of test

Liants pour peintures et vernis — Dispersions aqueuses de polymères et de copolymères — Méthodes générales d'essai

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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 7143 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in November 1981.

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

Australia	Hungary	Poland
Austria	India	Portugal
Belgium	Israel	Romania
Brazil	Italy	South Africa, Rep. of
Canada	Kenya	Sri Lanka
China	Korea, Rep. of	Sweden
Czechoslovakia	Netherlands	Switzerland
Egypt, Arab Rep. of	New Zealand	USSR
Germany, F.R.	Norway	

No member body expressed disapproval of the document.

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Binders for paints and varnishes — Aqueous dispersions of polymers and copolymers — General methods of test

1 Scope and field of application

This International Standard specifies general methods of test for aqueous dispersions of polymers and copolymers for paints and similar products.

The test methods to be applied for an individual dispersion shall be the subject of agreement between the interested parties.

2 References

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

ISO 1148, *Plastics — Aqueous dispersions of polymers and copolymers — Determination of pH.*

ISO 1625, *Plastics — Aqueous dispersions of polymers and copolymers — Determination of residue at* 105 °C.

ISO 2115, *Plastics — Aqueous dispersions of polymers and copolymers — Determination of white point temperature and minimum film-forming temperature.*

ISO 2811, *Paints and varnishes — Determination of density.*

ISO 3219, *Plastics — Polymers in the liquid, emulsified or dispersed state — Determination of viscosity with a rotational viscometer working at defined shear rate.*

3 Sampling

Take a representative sample of the dispersion to be tested as specified in ISO 842.

4 Methods of test

Property	Method of test
Viscosity 1)	ISO 3219
Residue at 105 °C	ISO 1625
pH value	ISO 1148
Coagulum content	— 2)
White point temperature	ISO 2115
Minimum film-forming temperature	ISO 2115 3)
Density 1)	ISO 2811
Freeze-thaw cycle stability	To be agreed between the interested parties

1) Some experience is necessary to avoid the inclusion of air bubbles in dispersions when filling viscometers or pyknometers.

2) A method of test for coagulum content will form the subject of a future International Standard.

3) ISO 2115 does not allow the use of chromed aluminium for the test surface although this is considered to be the most satisfactory material. Although ISO 2115 permits the use of stainless steel or copper, stainless steel has inadequate thermal conductivity and leads to unreliable results while copper reacts with a number of emulsions.

For temperatures over 50 °C, another method should be agreed.

5 Test report

The test report shall contain at least the following information :

a) the type and identification of the product tested;

b) a reference to this International Standard (ISO 7143);

c) the results of the tests, and the methods used;

d) any deviation, by agreement or otherwise, from the procedures specified;

e) the dates of the tests.

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