
**Binders for paints and varnishes —
Epoxy resins — General methods of
test**

*Liants pour peintures et vernis — Résines époxydiques — Méthodes
générales d'essai*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 7142:2007), which has been technically revised.

The main changes are as follows:

- the concentration of the phenolphthalein solution in [A.1.5](#) has been reduced to 0,5 g/l;
- the text has been editorially revised and the normative references have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Binders for paints and varnishes — Epoxy resins — General methods of test

1 Scope

This document specifies general methods of test for epoxy resins for use in paints, varnishes and similar products. It is also applicable to those solutions made from epoxy resins that are intended for use as binders for paints and varnishes.

The test methods described in this document are not intended for epoxy esters.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 385, *Laboratory glassware — Burettes*

ISO 648, *Laboratory glassware — Single-volume pipettes*

ISO 1523, *Determination of flash point — Closed cup equilibrium method*

ISO 3001, *Plastics — Epoxy compounds — Determination of epoxy equivalent*

ISO 3146, *Plastics — Determination of melting behaviour (melting temperature or melting range) of semi-crystalline polymers by capillary tube and polarizing-microscope methods*

ISO 3219-2, *Rheology — Part 2: General principles of rotational and oscillatory rheometry*

ISO 3251, *Paints, varnishes and plastics — Determination of non-volatile-matter content*

ISO 3679, *Determination of flash point — Method for flash no-flash and flash point by small scale closed cup tester*

ISO 4615, *Plastics — Unsaturated polyesters and epoxide resins — Determination of total chlorine content*

ISO 4625-1, *Binders for paints and varnishes — Determination of softening point — Part 1: Ring-and-ball method*

ISO 4625-2, *Binders for paints and varnishes — Determination of softening point — Part 2: Cup-and-ball method*

ISO 4630, *Clear liquids — Estimation of colour by the Gardner colour scale*

ISO 6271, *Clear liquids — Estimation of colour by the platinum-cobalt colour scale*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 21627-2, *Plastics — Epoxy resins — Determination of chlorine content — Part 2: Easily saponifiable chlorine*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.