



SLOVENSKI STANDARD
SIST EN ISO 15715:2006

01-april-2006

Veziva za barve in lake – Ugotavljanje motnosti (ISO 15715:2003)

Binders for paints and varnishes - Determination of turbidity (ISO 15715:2003)

Bindemittel für Beschichtungsstoffe - Bestimmung der Trübung (ISO 15715:2003)

Liants pour peintures et vernis - Détermination de la turbidité (ISO 15715:2003)

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ICS:

87.060.20

Veziva

Binders

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15715

February 2006

ICS 87.060.20

English Version

Binders for paints and varnishes - Determination of turbidity (ISO 15715:2003)

Liants pour peintures et vernis - Détermination de la turbidité (ISO 15715:2003)

Bindemittel für Beschichtungsstoffe - Bestimmung der Trübung (ISO 15715:2003)

This European Standard was approved by CEN on 16 January 2006.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of ISO 15715:2003 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 15715:2006 by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2006, and conflicting national standards shall be withdrawn at the latest by August 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 15715:2003 has been approved by CEN as EN ISO 15715:2006 without any modifications.

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INTERNATIONAL
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**Binders for paints and varnishes —
Determination of turbidity**

Liants pour peintures et vernis — Détermination de la turbidité

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ISO copyright office

Case postale 56 • CH-1211 Geneva 20

Tel. + 41 22 749 01 11

Fax + 41 22 749 09 47

E-mail copyright@iso.org

Web www.iso.org

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ISO 15715:2003(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 15715 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 10, *Test methods for binders for paints and varnishes*.

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Binders for paints and varnishes — Determination of turbidity

1 Scope

The measurement of the turbidity of liquids can be carried out visually or by instrument, but visual methods can be subjective. This method measures instrumentally the scattering of light by the insoluble matter in a liquid and therefore gives an objective determination of turbidity.

Turbidity in liquids is caused by the presence of undissolved matter (i.e. non-settling flocculation, gels or other suspended matter such as particles or droplets). In the case of finely dispersed undissolved matter, the turbidity may be determined by measuring the intensity of the light which is scattered by the particles when a beam of light is passed through the liquid.

This International Standard specifies an instrumental method for determining the turbidity of clear liquids. It is applicable to resins and resin solutions, solvents, clear coating materials, monomers and any other liquids where clarity is specified.

2 Terms and definitions

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

2.1

turbidity

reduction in the transparency of a liquid caused by the presence of undissolved matter

3 Principle

3.1 Principle of the method

A liquid sample is placed in an optical cell or glass jar and the turbidity measured on a ratio-recording turbidimeter. The instrument is calibrated in formazine turbidity units (FTUs). The turbidity of the sample can thus be read directly in FTUs. The readings are therefore insensitive to colour.

3.2 General principles of turbidity measurement

A liquid sample coloured by dissolved substances is a homogeneous system that only attenuates radiation passing through the sample. A sample containing undissolved substances not only attenuates the incident radiation but, in addition, the insoluble particles diffuse the radiation, unequally, in all directions (see Figure 1).

By determining the ratio between the light levels at 0° and 90° , a measure of the degree of scattering is obtained. A factor F relates this ratio to formazine concentration units.

The degree of scattering measured depends on the measurement angle, the particle size, the concentration of the particles, the wavelength of the light source and the complex refractive index of the particles relative to the liquid.

NOTE Instrument-to-instrument comparisons are only possible if the apparatus is used in accordance with this International Standard and the same principles of measurement are applied.