

Binders for paints and varnishes - Determination of softening point - Part 1: Ring-and-ball method

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softening point - Part 1: Ring-and-ball method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 4625-1:2006 sisaldab Euroopa standardi EN ISO 4625-1:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.03.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 4625-1:2006 consists of the English text of the European standard EN ISO 4625-1:2006.</p> <p>This document is endorsed on 30.03.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This part of ISO 4625 specifies methods of determining the softening point of resins (including rosin) and similar materials by means of the ring-and-ball apparatus. Both manual and automatic methods are specified.</p>	<p>Scope: This part of ISO 4625 specifies methods of determining the softening point of resins (including rosin) and similar materials by means of the ring-and-ball apparatus. Both manual and automatic methods are specified.</p>
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English Version

Binders for paints and varnishes - Determination of softening
point - Part 1: Ring-and-ball method (ISO 4625-1:2004)

Liants pour peintures et vernis - Détermination du point de
ramollissement - Partie 1: Méthode de l'anneau et de la
bille (ISO 4625-1:2004)

Bindemittel für Beschichtungsstoffe - Bestimmung der
Erweichungstemperatur - Teil 1: Verfahren mit Ring und
Kugel (ISO 4625-1:2004)

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Foreword

The text of ISO 4625-1:2004 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 4625-1:2006 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.

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Endorsement notice

The text of ISO 4625-1:2004 has been approved by CEN as EN ISO 4625-1:2006 without any modifications.

**Binders for paints and varnishes —
Determination of softening point —**

**Part 1:
Ring-and-ball method**

Liants pour peintures et vernis — Détermination du point de ramollissement —

Partie 1: Méthode de l'anneau et de la bille



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Foreword

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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 4625-1 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 10, *Test methods for binders for paints and varnishes*.

It cancels and replaces ISO 4625:1980, which has been technically and editorially revised to harmonize it with ASTM E 28-99, *Standard Test Methods for Softening Point of Resins Derived from Naval Stores by Ring-and-Ball Apparatus*. The main changes are the introduction of an automated procedure and the splitting of the softening point values into four ranges: less than 35 °C, 35 °C to less than 80 °C, 80 °C to 150 °C and greater than 150 °C. The moulding method for the preparation of test pieces has been deleted.

ISO 4625 consists of the following parts, under the general title *Binders for paints and varnishes — Determination of softening point*:

- *Part 1: Ring-and-ball method*
- *Part 2: Cup-and-ball method*

Binders for paints and varnishes — Determination of softening point —

Part 1: Ring-and-ball method

1 Scope

This part of ISO 4625 specifies methods of determining the softening point of resins (including rosin) and similar materials by means of the ring-and-ball apparatus.

Both manual and automatic methods are specified.

2 Normative references

The following referenced documents are indispensable for the application 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 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

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

IEC 60751, *Industrial platinum resistance thermometer sensors*

ASTM E 691, *Standard Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method*

3 Terms and definitions

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

3.1

softening point

temperature at which a disc of sample held within a horizontal ring is forced downward a distance of 25,4 mm under the weight of a steel ball as the disc is heated at a prescribed rate in a water, glycerol, silicone oil, ethylene glycol/water or glycerol/water bath

4 Principle

In general, with materials of the types mentioned in Clause 1, softening does not take place at a definite temperature. As the temperature rises, these materials gradually change from brittle or exceedingly thick and slow-flowing materials to softer and less viscous liquids. For this reason, the determination of the softening point must be made by a fixed, closely defined method if the results obtained are to be comparable.