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Third edition
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Binders for paints and varnishes — Linseed stand oil — Requirements and methods of test

Liants pour peintures et vernis — Standolies d'huile de lin — Exigences et méthodes d'essai

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Foreword

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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).

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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*.

This third edition cancels and replaces the second edition (ISO 276:2002), which has been technically revised. The main changes compared to the previous edition are as follows:

- Requirements for turbidity and colour have been added in Table 1;
- For the determination of acid value, ISO 660 has been added;
- For the determination of saponification value, ISO 3657 has been added;
- A general reference to ISO 4618 for terms and definitions has been added to Clause 3;
- The text has been editorially revised.

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 — Linseed stand oil — Requirements and methods of test

1 Scope

This document specifies the requirements and the corresponding test methods for five types of linseed stand oil suitable for paints and varnishes.

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 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

ISO 2114, *Plastics (polyester resins) and paints and varnishes (binders) — Determination of partial acid value and total acid value*

ISO 3657, *Animal and vegetable fats and oils — Determination of saponification value*

ISO 3681, *Binders for paints and varnishes — Determination of saponification value — Titrimetric method*

ISO 4618, *Paints and varnishes — Terms and definitions*

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

ISO 12058-1, *Plastics — Determination of viscosity using a falling-ball viscometer — Part 1: Inclined-tube method*

ISO 15715, *Binders for paints and varnishes — Determination of turbidity*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
linseed stand oil
polymerized linseed oil obtained from linseed oil by heat treatment

Note 1 to entry: Certain linseed stand oils are also referred to as “lithographic varnishes”.

4 Requirements and test methods

The five types of linseed stand oil shall meet the requirements and apply the test methods given in Table 1.

Table 1 — Required characteristics and test methods for linseed stand oil

Characteristic			Requirement					Test method
			Stand oil 1	Stand oil 2	Stand oil 3	Stand oil 4	Stand oil 5	
			(extra-low viscosity)	(low viscosity)	(medium viscosity)	(high viscosity)	(extra-high viscosity)	
Viscosity	at 20 °C	Pa·s	max. 1	>1 but ≤4	>4 but ≤8	>8 but ≤16	>16	
	at 23 °C	Pa·s	max. 0,9	>0,9 but ≤3,4	> 3,4 but ≤ 6,8	>6,8 but ≤13	>13	ISO 12058-1
	at 25 °C	Pa·s	max. 0,8	>0,8 but ≤3	>3 but ≤6	>6 but ≤11	>11	
Turbidity			Cold related turbidity in oils can be eliminated by heating up to more than 40 °C					ISO 15715
Colour (Gardner)			max. 8,0					ISO 4630
Acid value		mg KOH/g	max. 6	max. 10	max. 12	max. 15	max. 20	ISO 660 or ISO 2114
Saponification value		mg KOH/g	186 to 200					ISO 3657 or ISO 3681

5 Test report

The test report shall contain at least the following information:

a) all details necessary for complete identification of the product tested;

b) a reference to this document, i.e. ISO 276:2019;

c) the results of the tests, and whether or not the product complies with the relevant specification limits;

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

e) any specific agreements between the interested parties;

f) any unusual observations (anomalies) observed during the test;

g) the dates of the tests.

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