

# **SLOVENSKI STANDARD**

## **SIST EN ISO 3681:1998**

**01-avgust-1998**

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**Veziva za barve in lake - Določanje števila umiljenja - Titracijska metoda (ISO 3681:1996)**

Binders for paints and varnishes - Determination of saponification value - Titrimetric method (ISO 3681:1996)

Bindemittel für Beschichtungsstoffe - Bestimmung der Verseifungszahl - Titrimetrisches Verfahren (ISO 3681:1996)

Liants pour peintures et vernis - Détermination de l'indice de saponification - Méthode titrimétrique (ISO 3681:1996)

[SIST EN ISO 3681:1998](https://standards.iteh.ai/catalog/standards/sist/44acb776-58f5-410b-a760-913b10cf1d1/sist-en-iso-3681-1998)

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**Ta slovenski standard je istoveten z: EN ISO 3681:1998**

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**ICS:**

87.060.20

Veziva

Binders

**SIST EN ISO 3681:1998**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 3681

April 1998

ICS 87.060.20

Descriptors: see ISO document

English version

Binders for paints and varnishes - Determination of  
saponification value - Titrimetric method (ISO 3681:1996)

Liants pour peintures et vernis - Détermination de l'indice  
de saponification - Méthode titrimétrique (ISO 3681:1996)

Bindemittel für Beschichtungsstoffe - Bestimmung der  
Verseifungszahl - Titrimetrisches Verfahren (ISO  
3681:1996)

This European Standard was approved by CEN on 9 March 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

The text of the International Standard from Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) has been taken over as an European Standard 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 month of October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

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

## Endorsement notice

The text of the International Standard ISO 3681:1996 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**Annex ZA (normative)****Normative references to international publications  
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 3696	1987	Water for analytical laboratory use - Specification and test methods	EN ISO 3696	1995

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# INTERNATIONAL STANDARD

**ISO**  
**3681**

Third edition  
1996-06-01

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## **Binders for paints and varnishes — Determination of saponification value — Titrimetric method**

**iTeh STANDARD PREVIEW**

**(standards.iteh.ai)**

*Liants pour peintures et vernis — Détermination de l'indice de  
saponification — Méthode titrimétrique*

[SIST EN ISO 3681:1998](#)

<https://standards.iteh.ai/catalog/standards/sist/44acb776-58f5-410b-a760-913b10cfc1d1/sist-en-iso-3681-1998>



Reference number  
ISO 3681:1996(E)

## ISO 3681:1996(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.

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.

International Standard ISO 3681 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 10, *Test methods for binders for paints and varnishes*.

This third edition cancels and replaces the second edition (ISO 3681:1983), which has been technically and editorially revised. The main change is that the saponification value is no longer related to 1 g of non-volatile matter of the product but to 1 g of the product itself.

Annex A forms an integral part of this International Standard.

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International Organization for Standardization  
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# Binders for paints and varnishes — Determination of saponification value — Titrimetric method

## 1 Scope

This International Standard specifies a titrimetric method for determining the esterified-acid content in binders for paints and varnishes, free acids and acid anhydrides being necessarily included in the result obtained.

Because different binders vary in their resistance to saponification, this International Standard is of limited applicability. If necessary, completeness of saponification may be checked by repeating the test under more severe conditions achieved by the use of longer saponification time, more concentrated potassium hydroxide solution, or a higher-boiling alcohol as solvent.

Annex A specifies a procedure suitable for binders that saponify with difficulty.

The method is not applicable to those materials that show further reaction with alkalis beyond normal saponification.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 385-1:1984, *Laboratory glassware — Burettes — Part 1: General requirements*.

ISO 648:1977, *Laboratory glassware — One-mark pipettes*.

ISO 842:1984, *Raw materials for paints and varnishes — Sampling*.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

**3.1 saponification:** The formation of the alkali metal salts of derivatives of organic acids.

**3.2 saponification value:** The number of milligrams of potassium hydroxide (KOH) required for the saponification of 1 g of the product tested.

## 4 Principle

After a preliminary test to determine the saponification conditions (concentration of potassium hydroxide solution, saponification time, etc.) for the product to be tested, a test portion is boiled under reflux with potassium hydroxide solution under these conditions. The hot solution is titrated with standard volumetric hydrochloric acid, either in the presence of a colour indicator or potentiometrically.

## 5 Reagents

During the analysis, use only reagents of recognized analytical grade, and only water of at least grade 3 purity as defined in ISO 3696.

**5.1 Toluene,** or other suitable unsaponifiable solvent.