



# SLOVENSKI STANDARD

## SIST EN ISO 3231:1998

01-januar-1998

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**Barve in laki - Določevanje odpornosti proti vlažni atmosferi, ki vsebuje žveplov dioksid (ISO 3231:1993)**

Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide (ISO 3231:1993)

Beschichtungsstoffe - Bestimmung der Beständigkeit gegen feuchte, Schwefeldioxid enthaltende Atmosphären (ISO 3231:1993)

Peintures et vernis - Détermination de la résistance aux atmosphères humides contenant du dioxyde de soufre (ISO 3231:1993)

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**Ta slovenski standard je istoveten z: EN ISO 3231:1997**

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**ICS:**

87.040

Barve in laki

Paints and varnishes

**SIST EN ISO 3231:1998**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 3231

November 1997

ICS 87.040

Descriptors: See ISO document

English version

Paints and varnishes - Determination of resistance to humid atmospheres containing sulfur dioxide (ISO 3231:1993)

Peintures et vernis - Détermination de la résistance aux atmosphères humides contenant du dioxyde de soufre (ISO 3231:1993)

Beschichtungsstoffe - Bestimmung der Beständigkeit gegen feuchte, Schwefeldioxid enthaltende Atmosphären (ISO 3231:1993)

This European Standard was approved by CEN on 30 October 1997.

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 May 1998, and conflicting national standards shall be withdrawn at the latest by May 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 3231:1993 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 1512	1991	Paints and varnishes - Sampling of products in liquid or paste form	EN 21512	1994
ISO 1513	1992	Paints and varnishes - Examination and preparation of samples for testing	EN ISO 1513	1994
ISO 3696	1987	Water for analytical laboratory use - Specification and test methods	EN ISO 3696	1995
ISO 1514	1993	Paints and varnishes - Standard panels for testing	EN ISO 1514	1997

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INTERNATIONAL  
STANDARD

**ISO**  
**3231**

Second edition  
1993-01-15

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**Paints and varnishes — Determination of  
resistance to humid atmospheres  
containing sulfur dioxide**

**iTeh STANDARD PREVIEW**

*Peintures et vernis — Détermination de la résistance aux atmosphères  
humides contenant du dioxyde de soufre*

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20ce62924288/sist-en-iso-3231-1998](https://standards.iteh.ai/catalog/standards/sist/4d5af162-61de-4223-b031-20ce62924288/sist-en-iso-3231-1998)



Reference number  
ISO 3231:1993(E)

## ISO 3231:1993(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 3231 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Sub-Committee SC 9, *General test methods for paints and varnishes*.

This second edition cancels and replaces the first edition (ISO 3231:1974), of which it constitutes an editorial and minor technical revision.

Annex A forms an integral part of this International Standard.

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International Organization for Standardization  
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# Paints and varnishes — Determination of resistance to humid atmospheres containing sulfur dioxide

## 1 Scope

This International Standard is one of a series of standards dealing with the testing of paints, varnishes and related products. This International Standard specifies a procedure for determining the resistance of a single-coat film or a multi-coat system of paints or related products to humid atmospheres containing sulfur dioxide.

The test method allows for different amounts of sulfur dioxide; a volume of 0,2 litre, measured at atmospheric pressure, is generally recommended for testing coatings of thickness not exceeding approximately 40  $\mu\text{m}$ .

## 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 1512:1991, *Paints and varnishes — Sampling of products in liquid or paste form*.

ISO 1513:1992, *Paints and varnishes — Examination and preparation of samples for testing*.

ISO 1514:1984, *Paints and varnishes — Standard panels for testing*.

ISO 2808:1991, *Paints and varnishes — Determination of film thickness*.

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

ISO 4628-2:1982, *Paints and varnishes — Evaluation of degradation of paint coatings — Designation of intensity, quantity and size of common types of defect — Part 2: Designation of degree of blistering*.

ISO 4628-3:1982, *Paints and varnishes — Evaluation of degradation of paint coatings — Designation of intensity, quantity and size of common types of defect — Part 3: Designation of degree of rusting*.

## 3 Principle

A coated test panel is exposed to specified humid atmospheres containing sulfur dioxide and the effects of exposure are evaluated by criteria agreed in advance between the interested parties, these criteria usually being of a subjective nature.

## 4 Required supplementary information

For any particular application, the test method specified in this International Standard needs to be completed by supplementary information. The items of supplementary information are given in annex A.

## 5 Reagent

**5.1 Sulfur dioxide**, either supplied from a gas cylinder or gas-generating device fitted with appropriate regulating and measuring apparatus to ensure the supply of the correct volume of gas, or generated within the cabinet, for example by mixing analytical-grade sodium sulfite,  $\text{Na}_2\text{SO}_3$ , with an excess of analytical-grade sulfuric acid ( $\rho = 1,84 \text{ g/ml}$ ).

NOTE 1 To obtain 0,2 (or 1,0) litre of sulfur dioxide, use  $(1 \pm 0,025) \text{ g}$  [or  $(5,25 \pm 0,12) \text{ g}$ ] of sodium sulfite and at least 0,9 g (or 4,2 g) of sulfuric acid. It is recommended to dissolve the sodium sulfite in 50 ml of water of at least grade 3 as specified in ISO 3696, to dilute the sulfuric acid 1:1 by adding it to the water, to place both reagents in the cabinet, to shut the door or hood and to add the diluted sulfuric acid to the sodium sulfite solution with the aid of a tilting device.