



**SLOVENSKI STANDARD**  
**SIST EN ISO 2409:1997**

**01-december-1997**

---

**Barve in laki - Preskus oprijema z zarezovanjem rešetke (ISO 2409:1992)**

Paints and varnishes - Cross-cut test (ISO 2409:1992)

Lacke und Anstrichstoffe - Gitterschnittprüfung (ISO 2409:1992)

Peintures et vernis - Essai de quadrillage (ISO 2409:1992)

**Ta slovenski standard je istoveten z: EN ISO 2409:1994**

[SIST EN ISO 2409:1997](https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997)

<https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>

**ICS:**

87.040

Barve in laki

Paints and varnishes

**SIST EN ISO 2409:1997**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 2409:1997

<https://standards.iteh.ai/catalog/standards/sist/febf2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>

EUROPEAN STANDARD

EN ISO 2409

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1994

---

UDC 667.613:620.1

Descriptors: Paints, varnishes, coatings, tests, cut tests

English version

**Paints and varnishes - Cross-cut test  
(ISO 2409:1992)**

Peintures et vernis - Essais de quadrillage  
(ISO 2409:1992)

Lacke und Anstrichstoffe - Gitterschnittprüfung  
(ISO 2409:1992)

This European Standard was approved by CEN on 1994-08-22. 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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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

## Foreword

This European Standard has been taken over by the Technical Committee CEN/TC 139 "Paints and varnishes" from the work of ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO).

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 February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.

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

## Endorsement notice

The text of the International Standard ISO 2409:1992 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in annex ZA (normative)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 2409:1997](https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997)

<https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>

**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 (including amendments).

<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 3270	1984	Paints and varnishes and their raw Materials - Temperatures and humidities for conditioning and testing	EN 23270	1991

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 2409:1997](https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997)  
<https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 2409:1997

<https://standards.iteh.ai/catalog/standards/sist/febf2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>

# INTERNATIONAL STANDARD

**ISO  
2409**

Second edition  
1992-08-15

---

---

## Paints and varnishes — Cross-cut test

*Peintures et vernis — Essai de quadrillage*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 2409:1997

<https://standards.iteh.ai/catalog/standards/sist/feb2a70-a45b-4f32-8265-e4cd54b05303/sist-en-iso-2409-1997>



Reference number  
ISO 2409:1992(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 2409 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 2409:1972), which has been technically revised. The main technical changes in this second edition are that, in the procedure, the spacing of the cuts is prescribed, depending on the thickness of the coating and the type of substrate, and that for hard substrates application of adhesive tape has been added.

Annex A forms an integral part of this International Standard.

© ISO 1992

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland



# Paints and varnishes — Cross-cut test

## 1 Scope

**1.1** This International Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products. It specifies a test method for assessing the resistance of paint coatings to separation from substrates when a right-angle lattice pattern is cut into the coating, penetrating through to the substrate. The property measured by this empirical test procedure depends, among other factors, on the adhesion of the coating to either the preceding coat or the substrate. This procedure is not to be regarded, however, as a means of measuring adhesion.

Where a measurement of adhesion is required, attention is drawn to the method described in ISO 4624:1978, *Paints and varnishes — Pull-off test for adhesion*.

**NOTE 1** Although the test is primarily intended for use in the laboratory, the test is also suitable for field testing.

**1.2** The method described may be applied either as a pass/fail test or, where circumstances are appropriate, as a six-step classification test (see 8.3). When applied to a multi-coat system, assessment of the resistance to separation of individual layers of the coating from each other may be made.

**1.3** The test may be carried out on finished objects and/or on specially prepared test specimens.

Although the method is applicable to paint on hard (steel) and soft (wood and plaster) substrates, these different substrates need a different test procedure (see clause 7).

The method is not suitable for coatings of total thickness greater than 250  $\mu\text{m}$  or for textured coatings.

## NOTES

2 Coatings with a total thickness of over 250  $\mu\text{m}$  may be tested by means of a single cross-cut.

3 The method, when applied to coatings designed to give a rough patterned surface, will give results which will show too much variation.

## 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:—<sup>1)</sup>, *Paints and varnishes — Examination and preparation of samples for testing*.

ISO 1514:—<sup>2)</sup>, *Paints and varnishes — Standard panels for testing*.

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

ISO 3270:1984, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*.

IEC 454-2:1974, *Specifications for pressure-sensitive adhesive tapes for electrical purposes — Part 2: Methods of test*.

1) To be published. (Revision of ISO 1513:1980)

2) To be published. (Revision of ISO 1514:1984)