SLOVENSKI STANDARD
SIST EN ISO 4623:1997

01-december-1997

Barve in laki - Filiform korozijski preskus na jeklu (ISO 4623:1984)

Paints and varnishes - Filiform corrosion test on steel (ISO 4623:1984)

Lacke und Anstrichstoffe - Filiform-Korrosionsprüfung auf Stahl (ISO 4623:1984)

Peintures et vernis - Essai de corrosion filiforme sur acier (ISO 4623:1984)

Ta slovenski standard je istoveten z: **EN ISO 4623:1995**

ICS:

87.040 Barve in laki Paints and varnishes

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EUROPEAN STANDARD

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English version

Paints and varnishes - Filiform corrosion test on steel (ISO 4623:1984)

Peintures et vernis - Essai de corrosion filiforme sur acier (ISO 4623:1984)

Lacke und Anstrichstoffe - Filiform-Korrosionsprüfung auf Stahl (ISO 4623:1984)

This European Standard was approved by CEN on 1995-01-05. 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.

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CEN

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

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

Ref. No. EN ISO 4623:1995 E

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of an identical text or by endorsement, at the latest by September 1995, and conflicting national standards shall be withdrawn at the latest by September 1995.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 4623:1984 was approved by CEN as a European Standard without any modification.

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

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).

Publication	Year	Title	EN	Year
ISO 1512	1991	Paints and varnishes - Sampling of products in liquid or paste form	EN 21512	1994
ISO 1513	1991	Paints and varnishes - Examination and preparation of samples for testing	EN ISO 1513	1994
ISO 1514	1984	Paints and varnishes - Standard panels for testing (Modified)	EN 605	1992
ISO 2409	1992	Paints and varnishes - Cross-cut test	EN ISO 2409	1994

International Standard 4623

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Paints and varnishes — Filiform corrosion test on steel

Peintures et vernis — Essai de corrosion filiforme sur acier

First edition — 1984-07-01

UDC 667.613 : 620.193 **Ref. No. ISO 4623-1984 (E)**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4623 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in July 1982.

It has been approved by the member bodies of the following countries :

Australia	Iran	South Africa, Rep. of
Canada	Iraq	Sri Lanka
China	Israel	Sweden
Czechoslovakia	Jamaica	Switzerland
Egypt, Arab Rep. of	Kenya	Thailand
France	Korea, Rep. of	United Kingdom
Germany, F. R.	Mexico	USSR
Hungary	Netherlands	
India	Portugal	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Belgium
Italy

Printed in Switzerland

Paints and varnishes — Filiform corrosion test on steel

0 Introduction

This International Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products.

This International Standard describes a test procedure for assessing the protective action of coatings of paints or varnishes on steel against filiform corrosion arising from a scribed mark cut through the coating. This corrosion tends to develop when the relative humidity is high and when traces of salts are present either under the paint coating or at breaks in the coating. A certain amount of under-rusting of the substrate, starting from the scribed mark, will always occur. Filiform corrosion, however, is considered to be present only if the typical pattern in the form of threads is obvious (see figure 2).

For any particular application, the test method described in this International Standard needs to be completed by the following supplementary information. This information shall be derived, in part or totally, from the (inter)national standard or other document related to the product under test or, if appropriate, should be agreed between the interested parties.

a) Material and surface preparation of the substrate.

b) Method of application of the test coating to the substrate, including duration and conditions of drying between coats in the case of a multi-coat system.

c) Duration and conditions of drying of the coat (or conditions of stoving and ageing, if applicable) before testing.

d) Thickness, in micrometres, of the dry coating and method of measurement in accordance with ISO 2808, and whether it is a single coating or a multi-coat system.

e) Procedure for initiation of corrosion including, in the case of the salt fog technique, the period of exposure.

f) Duration of the test.

1 Scope and field of application

This International Standard describes a method for assessing the protective action of coatings of paints or varnishes against filiform corrosion on steel.

2 References

ISO/R 483, *Plastics — Methods for maintaining constant relative humidity in small enclosures by means of aqueous solutions.*

ISO 1512, *Paints and varnishes — Sampling.*

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

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

ISO 2409, *Paints and varnishes — Cross-cut test.*

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

ISO 7253, *Paints and varnishes — Determination of resistance to neutral salt spray.*

3 Definition

filiform corrosion : A type of corrosion proceeding under a coat of paint, varnish or related product, in the form of threads, generally starting from bare edges or from local damage to the coating.

NOTE — Usually the threads are irregular in length and direction of growth, but they may also be nearly parallel and of approximately equal length. It should be noted that filiform corrosion can also occur under other protective coatings.

4 Principle

Scribing of a mark on the coated test panel. Introduction of a small amount of sodium chloride into the scribed mark, either by dipping the panel in a solution of the salt or by exposure to salt-fog. Storage of the test panel in a test cabinet at 40 °C and a relative humidity of 80 %. Assessment of the amount of filiform corrosion developed from the scribed mark.

5 Test solutions

5.1 Sodium chloride solution, 1 g/litre (for the dipping technique)

Prepare this solution by dissolving 1 g of sodium chloride (see 5.2) in 1 litre of distilled or demineralized water. Place this solution in a vessel suitable for complete immersion of the test panel (see clause 8).