



SLOVENSKI STANDARD
SIST EN 24624:1997
01-december-1997

Barve in laki - Preskušanje adhezije z odtrganjem filma (ISO 4624:1978)

Paints and varnishes - Pull-off test (ISO 4624:1978)

Lacke und Anstrichstoffe - Abreißversuch für Haftfähigkeit (ISO 4624:1978)

Peintures et vernis - Essai de traction (ISO 4624:1978)

Ta slovenski standard je istoveten z: EN 24624:1992

[SIST EN 24624:1997](https://standards.iteh.ai/catalog/standards/sist/4dec3371-27e6-4a66-9ebb-f525166f88f9/sist-en-24624-1997)

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ICS:

87.040

Barve in laki

Paints and varnishes

SIST EN 24624:1997

en

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EUROPEAN STANDARD

EN 24624:1992

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 1992

UDC 667.613:620.179.4:620.172

Descriptors: Paints, varnishes, tests, tension tests, test equipment

English version

Paints and varnishes - Pull-off test (ISO 4624:1978)

Peintures et vernis - Essai de traction (ISO 4624:1978)

Lacke und Anstrichstoffe - Abreißversuch für Haftfähigkeit (ISO 4624:1978)

STANDARD PREVIEW
(standard.itech.ai)

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA
SIST. EN 24624
PREVZET PO METODI RAZGLASITVE

-12- 1997

This European Standard was approved by CEN on 1992-07-15. 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

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FOREWORD

This European Standard is the endorsement of ISO 4624. Endorsement of ISO 4624 was recommended by CEN/Technical Committee 139 "Paints and varnishes" under whose competence this European Standard will henceforth fall.

National standards identical to this European Standard will be published at the latest by 93-01-31 and conflicting national standards shall be withdrawn at the latest by 93-01-31.

The Standard was approved and in accordance with 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.

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Endorsement notice

The text of the International Standard ISO 4624:1978 was approved by CEN as a European Standard without any modification.



INTERNATIONAL STANDARD



4624

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

Paints and varnishes — Pull-off test for adhesion

Peintures et vernis — Essai de traction

First edition — 1978-07-01

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UDC 667.613 : 620.179.4

Ref. No. ISO 4624-1978 (E)

Descriptors : paints, varnishes, tests, tension tests, test equipment.

Price based on 7 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (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 set up 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 4624 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in August 1976.

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

Australia	Germany	Poland
Austria	India	Portugal
Belgium	Iran	Romania
Brazil	Israel	South Africa, Rep. of
Bulgaria	Korea, Rep. of	Sweden
Canada	Mexico	Switzerland
Chile	Netherlands	Turkey
Czechoslovakia	New Zealand	United Kingdom
Egypt, Arab Rep. of	Norway	Yugoslavia
France	Peru	

The member body of the following country expressed disapproval of the document on technical grounds :

Italy

Paints and varnishes – Pull-off test for adhesion

0 INTRODUCTION

This International Standard is one of a series of standards dealing with the sampling and testing of paints, varnishes and related products. It should be read in conjunction with ISO 1512, ISO 1513, ISO 1514 and ISO 2808.

This International Standard specifies a method for assessing the adhesion of a single coating or a multi-coat system of paint, varnish or related product by measuring the minimum tensile stress necessary to detach or to rupture the coating in a direction perpendicular to the substrate.

The test result is influenced not only by the mechanical properties of the system under test, but also by the nature and preparation of the substrate, the method of paint application, the drying conditions of the coating, temperature, humidity and other factors.

The method of test specified below requires to be completed, for any particular application, by the following supplementary information. This information should be derived from the national standard or other document for the product under test or, if appropriate, shall be the subject of agreement between the interested parties.

- a) Material and surface preparation of test assembly surface or substrate.
- b) Method of application of test coating to the substrate or test cylinder, if appropriate.
- c) Duration and conditions of drying of the coating (or conditions of stoving and ageing, if applicable) before testing.
- d) Thickness, in micrometres, of the dry coating, including the method of measurement in accordance with ISO 2808, and whether it is a single coating or a multi-coat system.
- e) The adhesive (and mixing ratios, if applicable) and curing conditions (see also clause 4).
- f) Duration and conditions between assembly and testing.
- g) Type of pull-off test assembly used (see 7.3).
- h) Type of tensile tester and diameter of test cylinder.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies methods for carrying out a pull-off test on a single coating or a multi-coat system of paint, varnish or related product.

The test may be applied using a wide range of substrates. Different procedures are specified according to whether the substrate is deformable, for example thin metal, plastics and wood, or rigid, for example thick concrete and metal plates. For special purposes, the coating may be applied to a test cylinder and, in this case, a method for determination of the coating thickness shall be agreed between the interested parties.

The test result is the minimum tensile stress necessary to break the weakest interface (adhesive failure) or the weakest component (cohesive failure) of the test assembly. Mixed adhesive/cohesive failures may also occur.

2 REFERENCES

- 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 2808, *Paints and varnishes – Determination of film thickness.*

3 APPARATUS

3.1 Tensile tester, suitable for carrying out the chosen procedure specified in clause 7. The tensile stress shall be applied in a direction perpendicular to the plane of the coated substrate and shall be increased at a substantially uniform rate, not greater than 1 MPa/s*, such that failure of the test assembly occurs within 90 s. Suitable designs for applying the tensile stress are shown in figures 1 and 2.

3.2 Test cylinders, suitable for use with the tensile tester (3.1), steel faced, of diameter 20 mm (unless otherwise agreed) and of sufficient thickness to ensure freedom from distortion during the test. It is recommended that the length of the test cylinder should be not less than half its diameter. The faces shall be machined perpendicular to the long axis of the cylinder before use.

* 1 MPa/s = 1 MN/m².s

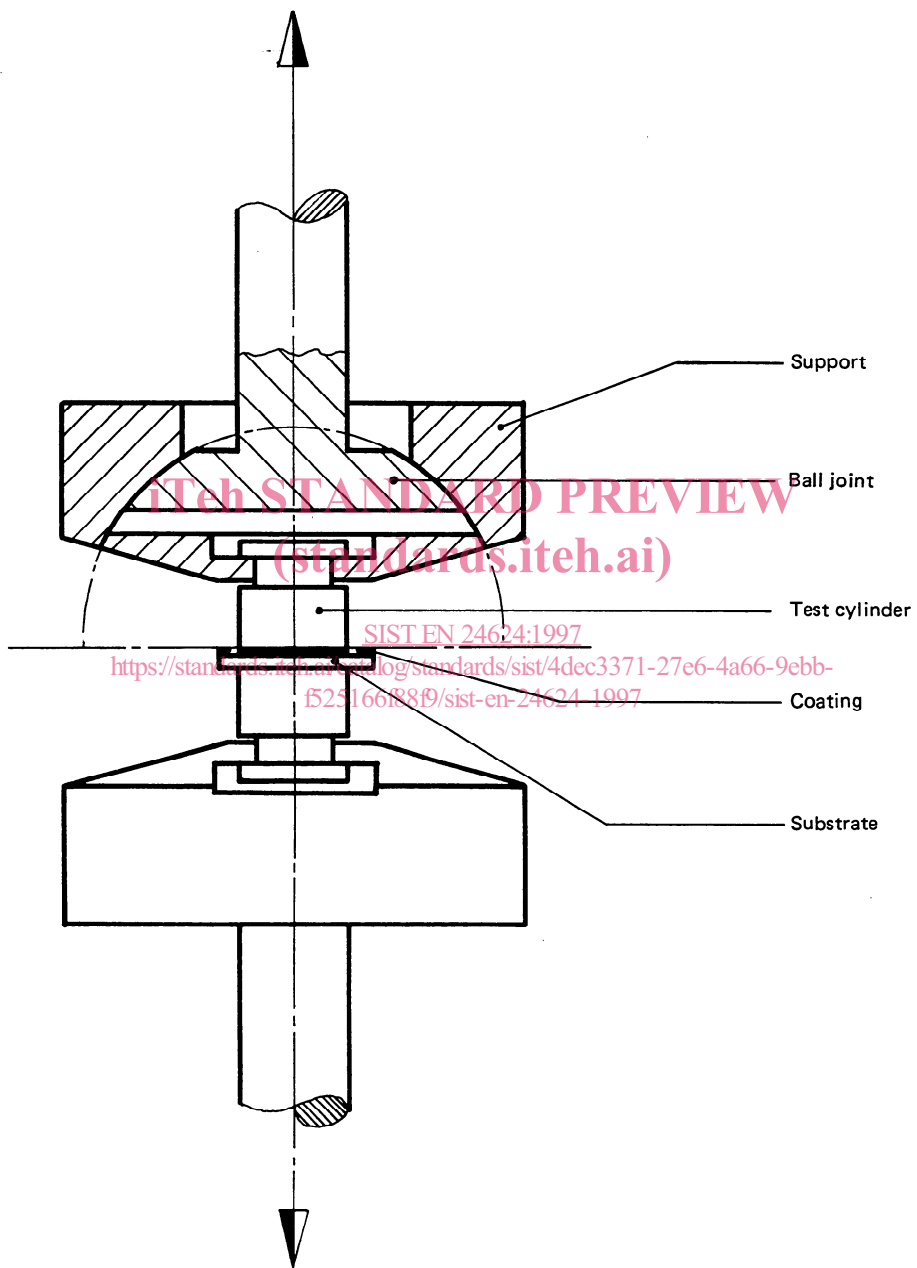


FIGURE 1 – Example of a suitable test apparatus for methods specified in 7.3.1 and 7.3.3

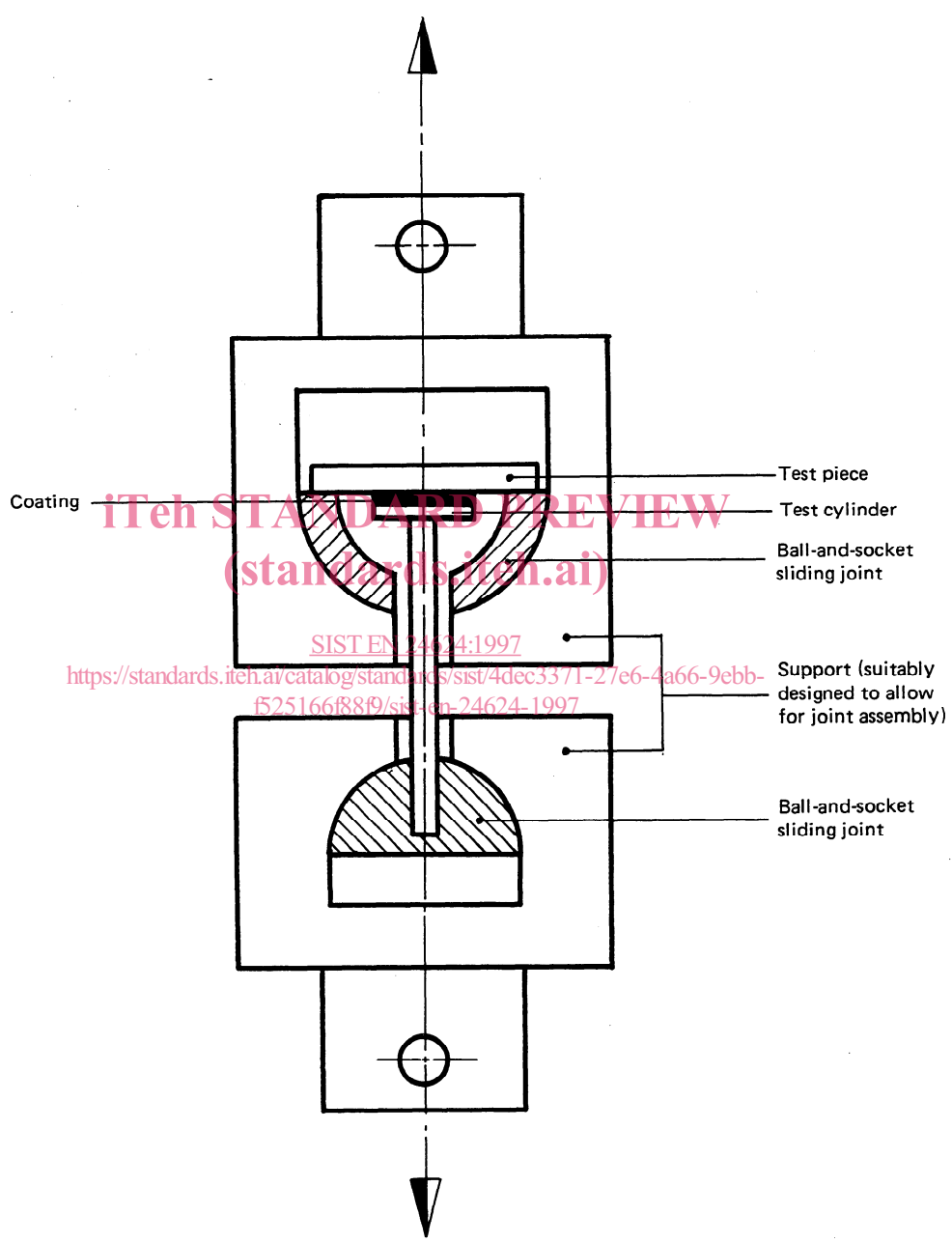


FIGURE 2 – Example of a suitable test apparatus for method specified in 7.3.2