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EUROPEAN STANDARD

EN ISO 6860

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 1995

ICS 87.040

Descriptors: paints, varnishes, tests, bend tests

English version

**Paints and varnishes - Bend test (conical mandrel)
(ISO 6860:1984)**

Peintures et vernis - Essai de pliage (mandrin
conique) (ISO 6860:1984)

Lacke und Anstrichstoffe - Dornbiegeversuch
(mit konischem Dorn) (ISO 6860:1984)

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SIST EN ISO 6860
 COMMITTEE FOR EUROPEAN STANDARDIZATION

-12- 1997

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.

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 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of an identical text or by endorsement, at the latest by September 1995, and conflicting national standards shall be withdrawn at the latest by September 1995.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 6860:1984 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications 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 (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	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 1519	1973	Paints and varnishes - Bend test (cylindrical mandrel)	EN ISO 1519	1995
ISO 1520	1973	Paints and varnishes - Cupping test	EN ISO 1520	1995
ISO 3270	1984	Paints and varnishes and their raw materials - Temperatures and humidities for conditioning and testing	EN 23270	1991
ISO 6272	1993	Paints and varnishes - Falling-weight test	EN ISO 6272	1994

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International Standard



6860

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

Paints and varnishes — Bend test (conical mandrel)

Peintures et vernis — Essai de pliage (mandrin conique)

First edition — 1984-06-01

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UDC 667.613.7 : 620.177 : 620.191.33

Ref. No. ISO 6860-1984 (E)

Descriptors : paints, varnishes, tests, bend tests, apparatus.

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 6860 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in October 1982.

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

Australia	Iran	Romania
Belgium	Iraq	South Africa, Rep. of
Brazil	Israel	Sri Lanka
Bulgaria	Italy	Sweden
Czechoslovakia	Jamaica	Switzerland
Egypt, Arab Rep. of	Kenya	Thailand
France	Mexico	United Kingdom
Germany, F.R.	Netherlands	USSR
Hungary	Norway	
India	Poland	

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

Canada

Paints and varnishes — Bend test (conical mandrel)

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 is one of four documents (see also ISO 1519, ISO 1520, and ISO/TR 6272) which specify empirical test procedures for assessing the resistance of coatings of paints, varnishes and related products to cracking and/or detachment from the substrate under different conditions of deformation.

For any particular application, the method of test described in this International Standard needs, to be completed by the following supplementary information. This information should 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, thickness and surface preparation of the substrate (see 5.1).
- b) Method of application of the test coating to the substrate.
- 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) Temperature and humidity for the test, if different from those specified in 5.3 and 6.1 (see also ISO 3270).

1 Scope and field of application

1.1 This International Standard describes an empirical test procedure for assessing the resistance of a coating of paint, varnish or related product to cracking and/or detachment from a metal substrate when subjected to bending around a conical mandrel under standard conditions.

1.2 For a multi-coat system, each coat may be tested separately or the complete system may be tested.

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 1519, *Paints and varnishes — Bend test (cylindrical mandrel).*
- ISO 1520, *Paints and varnishes — Cupping test.*
- ISO 2808, *Paints and varnishes — Determination of film thickness.*¹⁾
- ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing.*
- ISO/TR 6272, *Paints and varnishes — Falling weight test.*

1) At present at the stage of draft. (Revision of ISO 2808-1974.)