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STN	**Náterové látky Stanovenie odolnosti proti poškriabaniu Časť 1: Metóda s konštantným zaťažením (ISO 1518-1: 2023)**	**STN EN ISO 1518-1 67 3071**

Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method (ISO 1518-1:2023)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/23

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EN ISO 1518-1

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Supersedes EN ISO 1518-1:2019

English Version

Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method (ISO 1518-1:2023)

Peintures et vernis - Détermination de la résistance à la rayure - Partie 1: Méthode à charge constante (ISO 1518-1:2023)

Beschichtungsstoffe - Bestimmung der Kratzbeständigkeit - Teil 1: Verfahren mit konstanter Last (ISO 1518-1:2023)

This European Standard was approved by CEN on 29 January 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 1518-1:2023 E

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European foreword

This document (EN ISO 1518-1:2023) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with 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of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 1518-1:2019.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 1518-1:2023 has been approved by CEN as EN ISO 1518-1:2023 without any modification.

INTERNATIONAL STANDARD

ISO 1518-1

Third edition
2023-02

Paints and varnishes — Determination of scratch resistance —

Part 1: Constant-loading method

Peintures et vernis — Détermination de la résistance à la rayure —

Partie 1: Méthode à charge constante

Reference number
ISO 1518-1:2023(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 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 1518-1:2019), which has been technically revised.

The main changes are as follows:

— a total new designation of styli has been created, taking into account the type of the stylus already existing in the designation in previous editions;

— ISO 13076 has been added in 8.5 for lighting conditions for the visual evaluation of the scribe;

— Annex A has been added, giving a comparison of the designation of the scratch styli in the different editions of ISO 1518-1;

— the text has been editorially revised and the normative references have been updated.

A list of all parts in the ISO 1518 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

INTERNATIONAL STANDARD **ISO 1518-1:2023(E)**

Paints and varnishes — Determination of scratch resistance —

Part 1: Constant-loading method

1 Scope

This document specifies a test method for determining, under defined conditions, the resistance of a single coating or a multi-coat system of paint, varnish or related product to penetration, by scratching with a scratch stylus loaded with a specified load. The stylus penetrates to the substrate, except in the case of a multi-coat system, in which case the stylus can penetrate either to the substrate or to an intermediate coat.

The method specified can be carried out:

a) either as a "pass/fail" test, by testing with a single specified load applied to the stylus to assess conformity with a particular specification; or

b) as an assessment test by applying increasing loads to the stylus to determine the minimum load at which the coating is penetrated.

NOTE Neither this document nor ISO 1518-2 specifies a method using a curved stylus, which is specified in ISO 12137. The choice between the three methods depends on the particular practical problem.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

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

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

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 13076, *Paints and varnishes — Lighting and procedure for visual assessments of coatings*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*