

Paints and varnishes - Scratch test using a spring-loaded pen (ISO 22557:2019)

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EUROPEAN STANDARD

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English Version

Paints and varnishes - Scratch test using a spring-loaded pen (ISO 22557:2019)

Peintures et vernis - Essai de rayage manuel utilisant un barreau d'essai de dureté (ISO 22557:2019)

Beschichtungsstoffe - Kratzprüfung mit einem Härteprüfstab (ISO 22557:2019)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

The text of ISO 22557:2019 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 22557:2020 by 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of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

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.

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Endorsement notice

The text of ISO 22557:2019 has been approved by CEN as EN ISO 22557:2020 without any modification.

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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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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*.

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.

Paints and varnishes — Scratch test using a spring-loaded pen

1 Scope

This document specifies a method for determining the resistance of a coating to scratches introduced by a usually hand-held loaded stylus.

The test can be carried out using a point stylus (method A) or using a disc stylus (method B).

Both methods are generally applicable and can be used in the field as well as on curved surfaces. Method A can also be applied on small test specimens (minimum dimensions 30 mm × 50 mm).

The test can be carried out as a “pass/fail” test (test requirement I) or as a classification test (test requirement II).

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 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)*

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 14526-1, *Plastics — Phenolic powder moulding compounds (PF-PMCs) — Part 1: Designation system and basis for specifications*

CEN/TS 13388, *Copper and copper alloys — Compendium of compositions and products*

EN 10027-2, *Designation systems for steels — Part 2: Numerical system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

stylus

scratching tool with specified geometry

3.2

writing effect

smoothing of the surface profile of a coating by impact of a loaded *stylus* (3.1) being moved over the surface