

Paints and varnishes - Determination of stone-chip resistance of coatings - Part 2: Single-impact test with a guided impact body (ISO 20567-2:2023)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 20567-2:2023 sisaldab Euroopa standardi EN ISO 20567-2:2023 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 20567-2:2023 consists of the English text of the European standard EN ISO 20567-2:2023.
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English Version

**Paints and varnishes - Determination of stone-chip
resistance of coatings - Part 2: Single-impact test with a
guided impact body (ISO 20567-2:2023)**

Peintures et vernis - Détermination de la résistance des
revêtements aux impacts de cailloux - Partie 2: Essai de
choc simple par corps percutant guidé (ISO 20567-
2:2023)

Beschichtungsstoffe - Prüfung der Steinschlagfestigkeit
von Beschichtungen - Teil 2: Einzelschlagprüfung mit
geführtem Schlagkörper (ISO 20567-2:2023)

This European Standard was approved by CEN on 5 May 2023.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 20567-2:2023) 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of an identical text or by endorsement, at the latest by January 2024, and conflicting national standards shall be withdrawn at the latest by January 2024.

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 20567-2:2017.

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.

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Endorsement notice

The text of ISO 20567-2:2023 has been approved by CEN as EN ISO 20567-2:2023 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 document 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*, 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 20567-2:2017), which has been technically revised.

The main changes are as follows:

- [A.4](#) has been re-worded so that the use of a knife or similar instrument can be carried out without using another method beforehand;
- in [B.3](#), the requirement on how often the instrument shall be calibrated has been deleted;
- the normative references have been updated.

A list of all parts in the ISO 20567 series can be found on the ISO website.

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Introduction

In the automobile industry, multi-layer paint coatings are applied to car bodies for protection. Grit, road-metal and other materials can damage these coatings in such a way that individual layers come off or the whole coating delaminates from the substrate.

Stone chipping can be simulated by means of single- and/or multi-impact tests. ISO 20567-1 describes multi-impact testing, while this document and ISO 20567-3 describe single-impact tests.

Paints and varnishes — Determination of stone-chip resistance of coatings —

Part 2: Single-impact test with a guided impact body

1 Scope

This document specifies a method to evaluate the resistance of automobile finishes and other coatings to the impact of a wedge-shaped body which is projected onto the surface under test to simulate the impact of stones.

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

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

ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*

EN 573-3, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition and form of products*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Principle

The stone-chip resistance of the coating under test is checked by projecting a specified impact body onto it. The impact body used in the test has a wedge-shaped cutting edge to obtain a damage pattern equivalent to that produced in a multi-impact test. The wedge-shaped impact body is pushed onto the coating under test by the transmission of a pulse of energy from a steel ball, accelerated using compressed air.

The loose fragments of coating material are removed.

The stone-chip resistance is evaluated by measuring the total width of the delaminated coating, including the mark left by the wedge.