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

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 20567-2:2006 sisaldab Euroopa standardi EN ISO 20567-2:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 24.11.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 20567-2:2006 consists of the English text of the European standard EN ISO 20567-2:2006. This document is endorsed on 24.11.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This part of ISO 20567 specifies a method for the evaluation of the resistance of automobile finishes and other coatings to the impact of a wedge-shaped body projected onto the surface under test to simulate the impact of stones.	**Scope:** This part of ISO 20567 specifies a method for the evaluation of the resistance of automobile finishes and other coatings to the impact of a wedge-shaped body projected onto the surface under test to simulate the impact of stones.

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Võtmesõnad:

EUROPEAN STANDARD

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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 20567-2:2005)

Peintures et vernis - Détermination de la résistance des revêtements aux impacts de cailloux - Partie 2: Essai de choc simple par corps de choc à vol conduit (ISO 20567-2:2005)

Beschichtungsstoffe - Prüfung der Steinschlagfestigkeit von Beschichtungen - Teil 2: Einzelschlagprüfung mit geführtem Schlagkörper (ISO 20567-2:2005)

This European Standard was approved by CEN on 11 September 2006.

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.

This European Standard exists 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 20567-2:2006: E

Foreword

The text of ISO 20567-2:2005 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 20567-2:2006 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 April 2007, and conflicting national standards shall be withdrawn at the latest by April 2007.

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

Endorsement notice

The text of ISO 20567-2:2005 has been approved by CEN as EN ISO 20567-2:2006 without any modifications.

INTERNATIONAL STANDARD

ISO 20567-2

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

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

Peintures et vernis — Détermination de la résistance des revêtements aux impacts de cailloux —

Partie 2: Essai de choc simple par corps de choc à vol conduit

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 20567-2 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

ISO 20567 consists of the following parts, under the general title *Paints and varnishes — Determination of stone-chip resistance of coatings*:

— *Part 1: Multi-impact testing*

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

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. Part 1 of this International Standard describes multi-impact testing, Part 2 describes a single-impact test.

This part of ISO 20567 is based on the German Standard DIN 55996-2:2001, *Beschichtungsstoffe — Prüfung der Steinschlagfestigkeit von Beschichtungen — Teil 2: Einzelschlagprüfung (Paints and varnishes — Stone chip resistance test for coatings — Part 2: Single impact test)*.

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

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

1 Scope

This part of ISO 20567 specifies a method for the evaluation of the resistance of automobile finishes and other coatings to the impact of a wedge-shaped body projected onto the surface under test to simulate the impact of stones.

2 Normative references

The following referenced documents are indispensable for the application 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 samples for testing*

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*

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

IEC 60454-2, *Specification for pressure-sensitive adhesive tapes for electrical purposes — Part 2: Methods of test*

3 Principle

The stone-chip resistance of the coating under test is checked by projecting a defined 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.

Loose fragments of coating material are removed using adhesive tape.

The stone-chip resistance is evaluated visually or by means of optical imaging.