Irish Standard
I.S. EN ISO 20566:2013

Paints and varnishes - Determination of the scratch resistance of a coating system using a laboratory-scale car-wash (ISO 20566:2013)

I.S. EN ISO 20566:2013

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English Version

Paints and varnishes - Determination of the scratch resistance of a coating system using a laboratory-scale car-wash (ISO 20566:2013)

Peintures et vernis - Détermination de la résistance à la rayure d'un système de peinture sur un poste de lavage automobile de laboratoire (ISO 20566:2013)

Beschichtungsstoffe - Bestimmung der Kratzbeständigkeit von Beschichtungen mit einer Labor-Automobilwaschanlage (ISO 20566:2013)

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

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Foreword

This document (EN ISO 20566:2013) 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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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

This document supersedes EN ISO 20566:2006.

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Endorsement notice

The text of ISO 20566:2013 has been approved by CEN as EN ISO 20566:2013 without any modification.

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I.S. EN ISO 20566:2013

INTERNATIONAL STANDARD

ISO 20566

Second edition
2013-02-15

Paints and varnishes — Determination of the scratch resistance of a coating system using a laboratory-scale car-wash

Peintures et vernis — Détermination de la résistance à la rayure d'un système de peinture sur un poste de lavage automobile de laboratoire

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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 20566 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This second edition cancels and replaces the first edition (ISO 20566:2005), which has been technically revised. The main changes are:

a) a “terms and definitions” clause has been added, defining the terms mar, scratch, double pass, test area and reflow effect;

b) tolerances have been added to all key numerical values, such as dimensions;

c) the spread of the spray jet has been changed from 60° to 65°;

d) the thickness of the test panels has been specified;

e) the test procedure has been described in more detail;

f) a visual examination of the test panels has been added.

Introduction

With this test procedure, it is important to note that the test results will not, over time, remain constant, as a result of changes to the brush material. As the brush ages, the test will become more severe. As a result, the test procedure is suitable only for comparative tests carried out at any one time and using relatively short runs. Readings obtained using equipment which has accumulated different total numbers of operating hours are not comparable with each other.

INTERNATIONAL STANDARD ISO 20566:2013(E)

Paints and varnishes — Determination of the scratch resistance of a coating system using a laboratory-scale car-wash

1 Scope

This International Standard describes a test procedure for assessing the scratch resistance of organic paint coatings[1)], in particular paint coatings used in the automotive industry (i.e. for assessing their car-wash resistance). Machine-based washing is simulated in the laboratory environment using a rotating brush and synthetic dirt. The test conditions have been designed to be as close as possible to the real conditions in a car-wash. If the test parameters are suitably chosen, the method can also be used for testing protective plastics films and plastics components.

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 2813, *Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°*

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

ISO 4628-1, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 1: General introduction and designation system*

ISO 7724-1, *Paints and varnishes — Colorimetry — Part 1: Principles*

ISO 7724-2, *Paints and varnishes — Colorimetry — Part 2: Colour measurement*

ISO 7724-3, *Paints and varnishes — Colorimetry — Part 3: Calculation of colour differences*

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

ISO 13803, *Paints and varnishes — Determination of reflection haze on paint films at 20°*

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

3 Terms and definitions

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

3.1
mar, n
blemish on the surface of a coating, extending over a particular area of the coating and visible due to the difference in the light-reflection properties of the area affected compared with the light-reflection properties of adjacent areas

1) For the term “coating”, see ISO 4618.