BS EN ISO 2409:2020

BSI Standards Publication

Paints and varnishes - Cross-cut test

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National foreword

This British Standard is the UK implementation of EN ISO 2409:2020. It is identical to ISO 2409:2020. It supersedes BS EN ISO 2409:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee STI/10, Test methods for paints.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Peintures et vernis - Essai de quadrillage (ISO 2409:2020)

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European foreword

This document (EN ISO 2409:2020) 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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.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 2409:2020 has been approved by CEN as EN ISO 2409:2020 without any modification.

Documents
Document Sharing Hub

Full document details: BS EN ISO 2409:2020

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle ... **2**

5 Apparatus ... **2**
- 5.1 General ... 2
- 5.2 Cutting tool ... 2
  - 5.2.1 General requirements ... 2
  - 5.2.2 Single-blade cutting tools ... 2
  - 5.2.3 Multi-blade cutting tools ... 2
- 5.3 Guiding and spacing edges ... 5
- 5.4 Viewing lens ... 5

6 Sampling ... **6**

7 Test specimen ... **7**
- 7.1 Substrate ... 7
- 7.2 Thickness of coating ... 7

8 Procedure ... **7**
- 8.1 General ... 7
  - 8.1.1 Test conditions ... 7
  - 8.1.2 Conditioning of the test panels ... 7
  - 8.1.3 Number of cuts ... 7
  - 8.1.4 Spacing of cuts ... 7
  - 8.1.5 Number of determinations ... 8
- 8.2 Cutting the coating using the manual procedure ... 8
- 8.3 Cutting the coating using a motor-driven tool ... 8

9 Evaluation and expression of results ... **8**

10 Designation of the test result ... **9**

11 Precision ... **10**
- 11.1 Repeatability limit, *r* ... 10
- 11.2 Reproducibility limit, *R* ... 10

12 Test report ... **10**

Annex A (informative) **Examples of suitable procedures for removing loose paint** ... **12**

Bibliography ... **14**

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Full document details: BS EN ISO 2409:2020

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*, 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 fifth edition cancels and replaces the fourth edition (ISO 2409:2013), which has been technically revised. The main changes compared to the previous edition are as follows:

— Clause 3 has been added;

— Clause 4 has been added;

— the general requirements for the use of single-cutting tools and multi-cutting tools in 5.2.1 have been updated;

— references to commercially available cutters have been deleted from 5.2.2.3;

— coating of the test panels has been deleted from Clause 7, because final test specimen are assumed;

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

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.

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Paints and varnishes — Cross-cut test

1 Scope

This document specifies a test method for assessing the resistance of paint coatings and varnishes (including wood stains) to separation from substrates when a right-angle lattice pattern is cut into the coating, penetrating through to the substrate. The property determined by this empirical test procedure depends, among other factors, on the adhesion of the coating to either the preceding coat or the substrate. This procedure is not, however, a means of measuring adhesion.

NOTE 1 Where a measurement of adhesion is required, see the method described in ISO 4624.

NOTE 2 Although the test is primarily intended for use in the laboratory, the test is also suitable for field testing.

The method described can be used either as a pass/fail test or, where circumstances are appropriate, as a six-step classification test. When applied to a multi-coat system, assessment of the resistance to separation of individual layers of the coating from each other can be made.

The test can be carried out on finished objects and/or on specially prepared test specimens.

Although the method is applicable to paint on hard (e.g. metal) and soft (e.g. wood and plaster) substrates, these different substrates need a different test procedure (see Clause 8).

The method is not suitable for coatings of total thickness greater than 250 µm or for textured coatings.

NOTE 3 The method, when applied to coatings designed to give a rough patterned surface, will give results which will show too much variation (see also ISO 16276-2).

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 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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 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/

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