Irish Standard
I.S. EN ISO 4628-8:2012

Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 8: Assessment of degree of delamination and corrosion around a scribe or other artifi

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English Version

Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect (ISO 4628-8:2012)

Peintures et vernis - Évaluation de la dégradation des revêtements - Désignation de la quantité et de la dimension des défauts, et de l'intensité des changements uniformes d'aspect - Partie 8: Évaluation du degré de décollement et de corrosion autour d'une rayure ou d'un autre défaut artificiel (ISO 4628-8:2012)

Beschichtungsstoffe - Beurteilung von Beschichtungsschäden - Beurteilung der Menge und der Größe von Schäden und der Intensität von gleichmäßigen Veränderungen im Aussehen - Teil 8: Bewertung der von einem Ritz oder einer anderen künstlichen Verletzung ausgehenden Enthaftung und Korrosion (ISO 4628-8:2012)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN ISO 4628-8:2012) 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of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.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 4628-8:2005.

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

Endorsement notice

The text of ISO 4628-8:2012 has been approved by CEN as a EN ISO 4628-8:2012 without any modification.

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INTERNATIONAL STANDARD

ISO 4628-8

Second edition
2012-11-01

Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance —

Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect

Peintures et vernis — Évaluation de la dégradation des revêtements — Désignation de la quantité et de la dimension des défauts, et de l'intensité des changements uniformes d'aspect —

Partie 8: Évaluation du degré de décollement et de corrosion autour d'une rayure ou d'un autre défaut artificiel

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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 4628-8 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 4628-8:2005). For this revision:

a) the use of measurement and calculation to determine delamination and corrosion is preferred over the use of pictorial standards;

b) artificial defects with shape other than a linear scribe mark are introduced.

ISO 4628 consists of the following parts, under the general title *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*

— *Part 2: Assessment of degree of blistering*

— *Part 3: Assessment of degree of rusting*

— *Part 4: Assessment of degree of cracking*

— *Part 5: Assessment of degree of flaking*

— *Part 6: Assessment of degree of chalking by tape method*

— *Part 7: Assessment of degree of chalking by velvet method*

— *Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect*

— *Part 10: Assessment of degree of filiform corrosion*

Introduction

ISO 4628-1[1] defines a system for designating the quantity and size of defects and the intensity of uniform changes in appearance of coatings and outlines the general principles of the system. This system is intended to be used, in particular, for defects caused by ageing and weathering, and for uniform changes such as colour changes, for example yellowing.

The other parts of ISO 4628 provide pictorial standards or other means for evaluating particular types of defect. As far as possible, already existing evaluation schemes have been used as the basis.

After exposure of a coated test panel with a scribe or other artificial defect in a corrosive environment, one, or a combination of both of, the following phenomena can occur around the scribe or other artificial defect:

— delamination;

— corrosion.

Delamination and corrosion around the scribe or other artificial defect are evaluated separately to provide more detailed information about the performance of a coating system in corrosive environments.

In addition to the procedure specified in this part of ISO 4628, assessments of delamination and corrosion around the scribe or other artificial defect may be carried out using optical image processing.

Rating of other defects is described in other parts of ISO 4628.

Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance —

Part 8: Assessment of degree of delamination and corrosion around a scribe or other artificial defect

1 Scope

This part of ISO 4628 specifies a method for assessing delamination and corrosion around a scribe or other artificial defect on a coated panel or other coated test specimen, caused by a corrosive environment.

This part of ISO 4628 does not cover evaluation of pitting corrosion or pit depth.

NOTE 1 Examples of corrosive environments are artificial atmospheres such as salt spray, as used in the test method specified in ISO 9227,[7] and sea water immersion as used in the test method specified in ISO 15711.[8] Natural environments can also be used.

NOTE 2 The extent of other defects can also be determined at the same time as delamination and corrosion. Methods are given as follows:

— blistering in accordance with ISO 4628-2;[2]

— rusting in accordance with ISO 4628-3;[3]

— cracking in accordance with ISO 4628-4;[4]

— flaking in accordance with ISO 4628-5;[5]

— filiform corrosion in accordance with ISO 4628-10.[6]

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
holiday
absence of a paint film from certain areas of a coated substrate

3.2
artificial defect
holiday through a coating, deliberately introduced in order to expose the underlying metal substrate prior to exposure to a corrosive environment