



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 4628-3:2016

Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting (ISO 4628-3:2016)

**I.S. EN ISO 4628-3:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN ISO 4628-3:2016 is the adopted Irish version of the European Document EN ISO 4628-3:2016, Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting (ISO 4628-3:2016)

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*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

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**EUROPEAN STANDARD**

**EN ISO 4628-3**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

February 2016

ICS 87.040

Supersedes EN ISO 4628-3:2003

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 3:  
Assessment of degree of rusting (ISO 4628-3:2016)**

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 3: Évaluation  
du degré d'enrouillement (ISO 4628-3:2016)

Beschichtungsstoffe - Beurteilung von  
Beschichtungsschäden - Bewertung der Menge und der  
Größe von Schäden und der Intensität von  
gleichmäßigen Veränderungen im Aussehen - Teil 3:  
Bewertung des Rostgrades (ISO 4628-3:2016)

This European Standard was approved by CEN on 19 December 2015.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## **European foreword**

This document (EN ISO 4628-3:2016) 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 2016, and conflicting national standards shall be withdrawn at the latest by August 2016.

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 4628-3:2003.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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 4628-3:2016 has been approved by CEN as EN ISO 4628-3:2016 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
4628-3**

Third edition  
2016-01-15

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

### **Part 3: Assessment of degree of rusting**

*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 3: Évaluation du degré d'enrouillement*



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**ISO 4628-3:2016(E)**



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## ISO 4628-3:2016(E)

## 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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This third edition cancels and replaces the second edition (ISO 4628-3:2003), which has been technically revised with the following changes:

- a) a normative reference to ISO 13076 for illumination for the assessment has been added;
- b) a note on the rusted area of the degree of rusting Ri 5 has been added.

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*

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

## Part 3: Assessment of degree of rusting

### 1 Scope

This part of ISO 4628 specifies a method for assessing the degree of rusting of coatings by comparison with pictorial standards.

The pictorial standards provided in this part of ISO 4628 show coated steel surfaces which have deteriorated to different degrees by a combination of rust broken through the coating and visible underrust.

NOTE 1 The pictorial standards have been selected from the “European rust scale” published by the European Confederation of Paint, Printing Ink and Artists’ Colours Manufacturers’ Associations (CEPE), Brussels. The correlation between the ISO scale and the “European rust scale” is given in [Annex B, Table B.1](#).

NOTE 2 The correlation between the ISO scale and the rating system of ASTM D 610 is given in [Annex B, Table B.2](#).

NOTE 3 The rust formation on uncoated steel surfaces is designated in accordance with ISO 8501-1 (rust grades A, B, C, and D).

ISO 4628-1 defines the system used for designating the quantity and size of defects and the intensity of 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.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4628-1:2016, *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 13076, *Paints and varnishes — Lighting and procedure for visual assessments of coatings*

### 3 Terms and definitions

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

#### 3.1

#### degree of rusting

#### Ri

rating characterizing the degree of rust formation (rust broken through and visible underrust) on a coating

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