

Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 6: Assessment of degree of chalking by tape method (ISO 4628-6:2011)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 4628-6:2011 sisaldab Euroopa standardi EN ISO 4628-6:2011 ingliskeelset teksti.

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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 6: Assessment of degree
of chalking by tape method (ISO 4628-6:2011)

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
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méthode du ruban adhésif (ISO 4628-6:2011)

Beschichtungsstoffe - Beurteilung von
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Kreidungsgrades nach dem Klebebandverfahren (ISO
4628-6:2011)

This European Standard was approved by CEN on 31 August 2011.

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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 4628-6:2011) 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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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 4628-6:2007.

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Endorsement notice

The text of ISO 4628-6:2011 has been approved by CEN as a EN ISO 4628-6:2011 without any modification.

Introduction

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

The chalking scale used in the first (1990) edition and in this third edition of ISO 4628-6 consists of photographic pictures of adhesive tapes with different amounts of pigment particles adhering to them. The pigment particles are not evenly distributed over each tape. The lower ratings in particular (i.e. 1 to 3) give the impression of cloudiness. All five ratings in the scale used in the first (1990) edition and in this edition are sufficiently different for visual-assessment purposes, however.

The scale used in the second (2007) edition was computer-generated. Thus the white dots representing the pigment particles were distributed very evenly over the tape, with the result that not all the ratings differed sufficiently well from each other for visual assessment to be carried out. While ratings 0,5 to 3,0 on the black background on the 2007 scale could be differentiated sufficiently well from each other, it was hardly possible to differentiate visually between ratings above 3,0, especially ratings 4 and 5. On the white background, the difference between ratings 0,5, 1,0 and 1,5 was not easy to discern. The differences between ratings 1,5 to 5,0 were more evident, however.

Comparing the 1990 scale with the 2007 scale, it would appear that rating 1 on the 1990 scale corresponded to 0,5 on the 2007 scale, and rating 2 on the 1990 scale corresponded to 1 on the 2007 scale.

It was therefore decided that the 2007 scale was unsuitable for use in the visual assessment of the degree of chalking of paints over the whole rating scale from 0,5 to 5,0.

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

Part 6: Assessment of degree of chalking by tape method

IMPORTANT — For the assessment of the degree of chalking by the tape method, it is necessary to use the pictorial reference standards contained in this part of ISO 4628. Owing to the fact that electronic copies of these standards are subject to change when viewed on screen or printed, it is recommended that only the pictorial standards contained in printed copies of this part of ISO 4628 purchased from ISO member bodies or their distributors be used when comparing test results.

1 Scope

This part of ISO 4628 provides pictorial reference standards for designating the degree of chalking of paint coatings. It also describes a method by which the degree of chalking is rated. In using this method, it is essential that care be taken to distinguish between true degradation products and adhering dirt, particularly when chalking is slight.

2 Terms and definitions

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

2.1

chalking

appearance of a loosely adherent fine powder on the surface of a paint coating, arising from the degradation of one or more of its constituents

3 Principle

The chalking is removed from the coating under test using an adhesive tape. The chalking adhering to the tape is examined against a contrasting background (either black or white, whichever gives the greater contrast) and the degree of chalking is assessed with reference to a rating scale.

4 Materials

4.1 Self-adhesive transparent tape, of width at least 15 mm.

Commercially available flexible tapes, transparent and without perceptible colour, have been found to be satisfactory. However, the quality of the tape affects the rating obtained. The type of tape shall therefore be agreed on between the interested parties and shall be stated in the test report.

4.2 Background, black or white, with matt finish, for example card or velvet having a short pile without a tendency to be crushed.