

**Paints and varnishes - Coating of
aluminium and aluminium alloys for
architectural purposes - Part 1:
Coatings prepared from powder coating
materials**

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aluminium alloys for architectural purposes - Part 1:
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12206-1:2004 sisaldab Euroopa standardi EN 12206-1:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 26.10.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12206-1:2004 consists of the English text of the European standard EN 12206-1:2004.</p> <p>This document is endorsed on 26.10.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This Part of EN 12206 specifies requirements and the corresponding methods of test relating to the organic coating of aluminium and aluminium alloy extrusions, sheet and preformed sections for architectural purposes, using exclusively coating powders. It also describes : a) the pretreatment of the substrate prior to the coating process ; b) the coating powder ; c) the coating process ; d) the final product. Each item is dealt with separately in this Part of EN 12206 so that any interested party can ensure compliance appropriate to its area of responsibility.</p>	<p>Scope:</p> <p>This Part of EN 12206 specifies requirements and the corresponding methods of test relating to the organic coating of aluminium and aluminium alloy extrusions, sheet and preformed sections for architectural purposes, using exclusively coating powders. It also describes : a) the pretreatment of the substrate prior to the coating process ; b) the coating powder ; c) the coating process ; d) the final product. Each item is dealt with separately in this Part of EN 12206 so that any interested party can ensure compliance appropriate to its area of responsibility.</p>
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ICS 87.040

Võtmesõnad: aluminium, aluminium alloys, coated materials, coatings, construction, definition, definitions, paints, powder coatings, specification (approval), specifications, testing, varnishes

ICS 87.040

English version

Paints and varnishes - Coating of aluminium and aluminium alloys for architectural purposes - Part 1: Coatings prepared from coating powder

Peintures et vernis - Revêtements de l'aluminium et des alliages d'aluminium pour applications architecturales - Partie 1: Revêtements à partir de peintures en poudre

Beschichtungsstoffe - Beschichtungen auf Aluminium und Aluminiumlegierungen für Bauzwecke - Teil 1: Beschichtungen aus Beschichtungspulvern

This European Standard was approved by CEN on 27 December 2001.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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Foreword

This document (EN 12206-1:2004) has been prepared by 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 December 2004, and conflicting national standards shall be withdrawn at the latest by December 2004.

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

Annexes A, B, C, D and F are normative, annex E is for information only.

Introduction

This is the first Part of EN 12206. The present intention is to develop another Part dealing with the organic coating of aluminium and aluminium alloy extrusions, sheet and preformed sections for architectural purposes, prepared from liquid coating materials.

1 Scope

This Part of EN 12206 specifies requirements and the corresponding methods of test relating to the organic coating of aluminium and aluminium alloy extrusions, sheet and preformed sections for architectural purposes, using coating powders. It also describes:

- a) the pretreatment of the substrate prior to the coating process;
- b) the coating powder;
- c) the coating process;
- d) the final product.

Each item is dealt with separately in this Part of EN 12206 so that any interested party can ensure compliance appropriate to its area of responsibility.

CAUTION — The procedures described in this standard are intended to be carried out by suitably trained and/or supervised personnel. The substances and procedures used in this method may be injurious to health if adequate precautions are not taken. Attention is drawn in the text to specific hazards. This standard refers only to technical suitability and does not absolve the user from statutory obligations relating to health and safety.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 573-3, *Aluminium and aluminium alloys – Chemical composition and form of wrought products – Part 3: Chemical composition*.

EN ISO 1519, *Paints and varnishes – Bend test (cylindrical mandrel) (ISO 1519:2002)*.

EN ISO 1520, *Paints and varnishes – Cupping test (ISO 1520:1999)*.

EN ISO 2409, *Paints and varnishes – Cross-cut test (ISO 2409:1992)*.

EN ISO 2813, *Paints and varnishes – Determination of specular gloss of non-metallic paint films at 20°, 60° and 85° (ISO 2813:1994, including Technical Corrigendum 1:1997)*.

EN ISO 3231, *Paints and varnishes – Determination of resistance to humid atmospheres containing sulfur dioxide (ISO 3231:1993)*.

EN ISO 3668, *Paints and varnishes – Visual comparison of the colour of paints (ISO 3668:1998)*.

EN ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*.

EN ISO 6270-1, *Paints and varnishes – Determination of resistance to humidity – Part 1: Continuous condensation (ISO 6270-1:1998)*.

EN ISO 8130-9, *Coating powders – Part 9: Sampling (ISO 8130-9:1992)*.

EN ISO 8565, *Metals and alloys – Atmospheric corrosion testing – General requirements for field tests (ISO 8565:1992)*.

EN ISO 11341:1997, *Paints and varnishes – Artificial weathering and exposure to artificial radiation – Exposure to filtered xenon-arc radiation (ISO 11341:1994)*.

ISO 2810, *Paints and varnishes – Notes for guidance on the conduct of natural weathering tests*.

ISO 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*.

ISO 2859-2, *Sampling procedure for inspection by attributes – Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection*.

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

ISO 9227, *Corrosion tests in artificial atmospheres – Salt spray tests*.

3 Terms and definitions

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

3.1

powder coating

a continuous layer of a coating powder which has been applied to the aluminium or aluminium alloy substrate and which is protective or decorative, or both

3.2

conversion layer

a layer produced on an aluminium surface by chemical pretreatment with or without the use of an applied electric current

3.3

finish

the surface of the coated article which determines its appearance

3.4

coating powder

a solvent-free coating material in powder form which, after fusing and possible curing, gives a continuous film

[EN 971-1:1996]

3.5

significant surface

that area of the article on which the coating is essential for serviceability and/or appearance

3.6

specifier

the person specifying the performance requirements for the coating and significant surfaces of the article

3.7

test specimen

a single sample of the final product to be used for testing

4 Requirements

4.1 Material (substrate)

Aluminium and aluminium alloys are classified in accordance with EN 573-3. Suitable materials are those listed as series 1000, 3000, 5000 and 6000.