

**Pigmendid tsemendil ja/või lubjal
põhinevate ehitusmaterjalide
värvimiseks. Spetsifikatsioon ja
katsemeetodid**

Pigments for the colouring of building materials
based on cement and/or lime - Specifications and
methods of test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12878:2005 sisaldab Euroopa standardi EN 12878:2005 + AC:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.07.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12878:2005 consists of the English text of the European standard EN 12878:2005 + AC:2006.</p> <p>This document is endorsed on 15.07.2005 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 European Standard specifies the requirements and the methods of test for pigments for use in the colouring of building materials based on cement and cement/lime combinations. Pigments covered by this European Standard may also be used in pure lime mortar. For this application see EN 459-1 and EN 459-2.</p>	<p>Scope:</p> <p>This European Standard specifies the requirements and the methods of test for pigments for use in the colouring of building materials based on cement and cement/lime combinations. Pigments covered by this European Standard may also be used in pure lime mortar. For this application see EN 459-1 and EN 459-2.</p>
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Võtmesõnad: cements, coating materials, concretes, conformity, dyeing

English version

Pigments for the colouring of building materials based on cement and/or lime - Specifications and methods of test

Pigments de coloration des matériaux de construction à
base de ciment et/ou de chaux - Spécifications et
méthodes d'essai

Pigmente zum Einfärben von zement- und/oder
kalkgebundenen Baustoffen - Anforderungen und
Prüfverfahren

This European Standard was approved by CEN on 25 March 2005.

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.

CEN members are the national standards bodies of 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.



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Foreword

This document (EN 12878:2005) has been prepared by Technical Committee CEN/TC 298 "Pigments and extenders", 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 November 2005, and conflicting national standards shall be withdrawn at the latest by February 2007.

This document supersedes EN 12878:1999.

Annex A gives further information regarding the test methods.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA which is an integral part of this document.

This document includes a Bibliography with currently existing International Standards for particular pigments suitable for use in building materials based on cement and/or lime.

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.

1 Scope

This European Standard specifies the requirements and the test methods for pigments for use in the colouring of building materials based on cement and cement/lime combinations.

Pigments covered by this European Standard can also be used in pure lime mortar. For this application see EN 459-1 and EN 459-2.

Pigments for this purpose can be single pigments, blends of pigments, or blends of pigments and extenders, in powder or granular form, or aqueous preparations.

Pigments typically belong to one of the following classes of compounds:

- synthetic or natural oxides and hydroxides of iron;
- oxides of chromium, titanium and manganese;
- complex inorganic pigments, for example combinations of the above mentioned metal oxides and hydroxides with cobalt, aluminium, nickel and antimony oxides and hydroxides;
- ultramarine pigments;
- phthalocyanine blue and green;
- elemental carbon (should be regarded as an inorganic pigment);
- blends of the above materials (which may also include extenders).

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.

EN 196-1:2005, *Methods of testing cement — Part 1: Determination of strength*

EN 196-3, *Methods of testing cement — Part 3: Determination of setting times and soundness*

EN 197-1, *Cement — Part 1: Composition, specifications and conformity criteria for common cements*

EN 934-2, *Admixtures for concrete, mortar and grout — Part 2: Concrete admixtures – Definitions, requirements, conformity, marking and labelling*

EN ISO 787-3, *General methods of test for pigments and extenders - Part 3: Determination of matter soluble in water - Hot extraction method (ISO 787-3:2000)*

EN ISO 787-9, *General methods of test for pigments and extenders — Part 9: Determination of pH value of aqueous suspension (ISO 787-9:1981)*

EN ISO 787-13, *General methods of test for pigments and extenders - Part 13: Determination of water-soluble sulfates, chlorides and nitrates (ISO 787-13:2002)*

EN ISO 1158, *Plastics - Vinyl chloride homopolymers and copolymers - Determination of chlorine content (ISO 1158:1998)*

EN ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling (ISO 15528:2000)*

ISO 787-7, *General methods of test for pigments and extenders — Part 7: Determination of residue on sieve — Water method — Manual procedure*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 7724-1, *Paints and varnishes — Colorimetry — Part 1: Principles*

ISO 9277, *Determination of the specific surface area of solids by gas adsorption using the BET method*

3 Terms and definitions

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

3.1

pigment

substance, generally in the form of fine particles, which is insoluble in the application medium and whose sole purpose is to colour cement- and/or lime-based building materials

3.2

single pigment

pigment of singular (chemical) composition containing no substances other than those originating from the pigment manufacturing process

NOTE Surface treatment of the primary pigment particles is considered as a part of the pigment manufacturing process.

3.3

pigment blend

blend of at least two single pigments, or at least one single pigment and an extender

3.4

aqueous pigment preparation

preparation in which a pigment (single pigment or pigment blend) is dispersed in water, with or without a dispersion or other agent

NOTE Examples of agents are:

- dispersants;
- binding agents (resins);
- solvents;
- wetting agents;
- or combinations thereof.

3.5

pigment in granular form

preparation in which a pigment (single pigment or pigment blend) is converted into granules, by the use of a binding agent which retains the integrity of the granule

3.6

reference sample

standard pigment

sample of a single pigment or a blend (powder, or preparation) retained by the interested parties for comparison for the evaluation of the product properties

3.7

extender

inorganic substance, generally a material in granular or powder form, which is insoluble in the application medium and has no inherent colour properties