

Hydraulically bound mixtures - Specifications - Part 2: Slag bound mixtures

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2: Slag bound mixtures

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14227-2:2004 sisaldab Euroopa standardi EN 14227-2:2004 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 14227-2:2004 consists of the English text of the European standard EN 14227-2:2004.</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 document specifies "slag bound mixtures" for roads, airfields and other trafficked areas and specifies the requirements for their constituents, composition and laboratory performance classification. In this document slag refers to slag from the iron and steel industry.</p>	<p>Scope:</p> <p>This document specifies "slag bound mixtures" for roads, airfields and other trafficked areas and specifies the requirements for their constituents, composition and laboratory performance classification. In this document slag refers to slag from the iron and steel industry.</p>
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Võtmesõnad: aggregates, flame propagatio, particulate materials, pavements, pavements (roads), road construction, roads, rocks, size ranges, slags, specification (approval), specifications, steel mill slag, testing, testing conditions, unbound, water, water content

ICS 01.040.93; 93.080.20

English version

Hydraulically bound mixtures - Specifications - Part 2: Slag bound mixtures

Mélanges traités aux liants hydrauliques - Spécifications -
Partie 2 : Mélanges traités au laitier

Hydraulisch gebundene Gemische - Anforderungen - Teil 2:
Schlackengebundene Gemische

This European Standard was approved by CEN on 16 April 2004.

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 14227-2:2004) has been prepared by Technical Committee CEN/TC 227 "Road materials", 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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This standard is one of a series of standards for hydraulically bound mixtures:

EN 14227-1, *Hydraulically bound mixtures — Specifications — Part 1: Cement bound granular mixtures.*

EN 14227-2, *Hydraulically bound mixtures — Specifications — Part 2: Slag bound mixtures.*

EN 14227-3, *Hydraulically bound mixtures — Specifications — Part 3: Fly ash bound mixtures n, classification.*

EN 14227-4, *Hydraulically bound mixtures — Specifications — Part 4: Fly ash for hydraulically bound mixtures.*

EN 14227-5, *Hydraulically bound mixtures — Specifications — Part 5: Hydraulic road binder bound mixtures.*

prEN 14227-10, *Hydraulically bound mixtures — Specifications — Part 10: Soil treated by cement.*

prEN 14227-11, *Unbound and hydraulically bound mixtures — Specifications — Part 11: Soil treated by lime.*

prEN 14227-12, *Unbound and hydraulically bound mixtures — Specifications — Part 12: Soil treated by slag.*

prEN 14227-13, *Unbound and hydraulically bound mixtures — Specifications — Part 13: Soil treated by hydraulic road binder.*

prEN 14227-14, *Unbound and hydraulically bound mixtures — Specifications — Part 14: Soil treated by fly ash.*

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 document specifies “slag bound mixtures” for roads, airfields and other trafficked areas and specifies the requirements for their constituents, composition and laboratory performance classification. In this document slag refers to slag from the iron and steel industry.

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 196-6, *Methods of testing cement — Part 6: Determination of fineness.*

EN 933-1, *Tests for geometrical properties of aggregates — Part 1: Determination of particle size distribution — Sieving method.*

EN 1097-6, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption.*

EN 1097-7, *Tests for mechanical and physical properties of aggregates — Part 7: Determination of particle density of filler — Pyknometer method.*

EN 13242, *Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction.*

EN 13286-1, *Unbound and hydraulically bound mixtures — Part 1: Test methods for laboratory reference density and water content — Introduction, general requirements and sampling.*

prEN 13286-2, *Unbound and hydraulically bound mixtures — Part 2: Test methods for the determination of the laboratory reference density and water content — Proctor compaction.*

EN 13286-3, *Unbound and hydraulically bound mixtures — Part 3: Test methods for laboratory reference density and water content — Vibrocompression with controlled parameters.*

EN 13286-4, *Unbound and hydraulically bound mixtures — Part 4: Test methods for laboratory reference density and water content — Vibrating hammer.*

EN 13286-5, *Unbound and hydraulically bound mixtures — Part 5: Test methods for laboratory reference density and water content — Vibrating table.*

EN 13286-40, *Unbound and hydraulically bound mixtures — Part 40: Test method for the determination of the direct tensile strength of hydraulically bound mixtures.*

EN 13286-41, *Unbound and hydraulically bound mixtures — Part 41: Test method for the determination of the compressive strength of hydraulically bound mixtures.*

EN 13286-42, *Unbound and hydraulically bound mixtures — Part 42: Test method for the determination of the indirect tensile strength of hydraulically bound mixtures.*

EN 13286-43, *Unbound and hydraulically bound mixtures — Part 43: Test method for the determination of the modulus of elasticity of hydraulically bound mixtures.*

EN 13286-44, *Unbound and hydraulically bound mixtures — Part 44: Test method for the determination of the alpha coefficient of vitrified blast furnace slag.*

EN 13286-47, *Unbound and hydraulically bound mixtures — Part 47: Test method for the determination of the California bearing ratio, immediate bearing index and linear swelling.*

prEN 13286-50, *Unbound and hydraulically bound mixtures — Part 50: Method for the manufacture of test specimens of hydraulically bound mixtures using Proctor equipment or vibrating table compaction.*

prEN 13286-51, *Unbound and hydraulically bound mixtures — Part 51: Method for the manufacture of test specimens of hydraulically bound mixtures by vibrating hammer compaction.*

prEN 13286-52, *Unbound and hydraulically bound mixtures — Part 52: Method for the manufacture of test specimens of hydraulically bound mixtures by vibrocompression.*

prEN 13286-53, *Unbound and hydraulically bound mixtures — Part 53: Method for the manufacture of test specimens of hydraulically bound mixtures by axial compression.*

prEN 14227-11, *Unbound and hydraulically bound mixtures — Specifications — Part 11: Soil treated by lime.*

3 Terms and definitions

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

3.1

hydraulically bound mixture

mixture which sets and hardens by hydraulic reaction

3.2

slag bound mixture

mixture containing one or more of the following slags and water, which hardens by hydraulic reaction and/or carbonation

NOTE Hardening may be accelerated by the addition of an activator defined in 5.5.

3.3

air-cooled blast furnace slag

aggregate made mainly of crystalline silicates and aluminosilicates of calcium and magnesium, obtained by slow air cooling of molten blastfurnace slag

NOTE Air-cooled blastfurnace slag is obtained by slow air cooling of molten blastfurnace slag. The cooling process may be assisted by the controlled application of water. Air-cooled blastfurnace slag hardens by hydraulic reaction and carbonation.

3.4

air-cooled steel slag

aggregate made mainly of crystalline calcium silicates and calcium ferrites comprising CaO, SiO₂, MgO and iron oxides, obtained by slow air cooling of molten steel slag

NOTE The cooling process may be assisted by the controlled application of water. Air-cooled steel slag hardens mainly by carbonatic reactions.

3.5

granulated blast furnace slag

glassy, sandy material made up mainly of CaO, SiO₂, Al₂O₃ and MgO, produced generally by rapid water quenching of molten blast furnace slag

NOTE 1 Granulated blast furnace slag hardens by hydraulic reaction.

NOTE 2 Pelletized and dry granulated blastfurnace slag may have similar hydraulic properties.