



NSAI
Standards

Irish Standard
I.S. EN 14227-4:2013

Specifications - Part 4: Fly ash for hydraulically bound mixtures

I.S. EN 14227-4:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:
EN 14227-4:2004

<i>This document is based on:</i>	<i>Published:</i>
EN 14227-4:2013	16 May, 2013
EN 14227-4:2004	14 July, 2004

This document was published under the authority of the NSAI and comes into effect on:
16 May, 2013

ICS number:
93.080.20

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

Specifications - Part 4: Fly ash for hydraulically bound mixtures

Mélanges traités aux liants hydrauliques - Spécifications -
Partie 4: Cendre volante pour mélanges traités aux liants
hydrauliques

Hydraulisch gebundene Gemische - Anforderungen - Teil 4:
Flugasche für hydraulisch gebundene Gemische

This European Standard was approved by CEN on 1 March 2013.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	5
4.1 General.....	5
4.2 Requirements for siliceous fly ash	5
4.2.1 Particle size	5
4.2.2 Loss on ignition	5
4.2.3 Sulfuric anhydride	5
4.2.4 Free calcium oxide and soundness	6
4.2.5 Water content	6
4.2.6 Pozzolanic activity of siliceous fly ash	6
4.3 Requirements for calcareous fly ash.....	6
4.3.1 Particle size	6
4.3.2 Soundness.....	6
4.3.3 Reactive calcium oxide	6
4.3.4 Water content.....	6
4.3.5 Hydraulic activity of calcareous fly ash	6
5 Production control.....	7
6 Marking and labelling	7

Foreword

This document (EN 14227-4:2013) 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 November 2013, and conflicting national standards shall be withdrawn at the latest by November 2013.

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 14227-4:2004.

Compared with EN 14227-4:2004, the following changes have been made:

- Revision of Clause 4.2 "Requirements for siliceous fly ash";
- Revision of Clause 4.3 "Requirements for calcareous fly ash".

This standard is one of a series of parts for EN 14227, *Hydraulically bound mixtures — Specifications*:

- *Part 1: Cement bound granular mixtures*
- *Part 2: Slag bound granular mixtures*
- *Part 3: Fly ash bound granular mixtures*
- *Part 4: Fly ash for hydraulically bound mixtures*
- *Part 5: Hydraulic road binder bound granular mixtures*
- *Part 10: Soil treated by cement*
- *Part 11: Soil treated by lime*
- *Part 12: Soil treated by slag*
- *Part 13: Soil treated by hydraulic road binder*
- *Part 14: Soil treated by fly ash*

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

1 Scope

This European Standard specifies siliceous and calcareous fly ash used in hydraulically bound mixtures for roads, airfields and other trafficked areas. This European Standard applies to fly ash produced by the combustion of pulverised coal or lignite in energy generating plants.

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.

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

EN 196-2, *Methods of testing cement — Part 2: Chemical analysis of cement*

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

EN 196-7, *Methods of testing cement — Part 7: Methods of taking and preparing samples of cement*

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

EN 450-1, *Fly ash for concrete — Part 1: Definition, specifications and conformity criteria*

EN 451-1, *Method of testing fly ash — Part 1: Determination of free calcium oxide content*

EN 451-2, *Method of testing fly ash — Part 2: Determination of fineness by wet sieving*

EN 933-10, *Tests for geometrical properties of aggregates — Part 10: Assessment of fines — Grading of filler aggregates (air jet sieving)*

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

3 Terms and definitions

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

3.1

fly ash

fine powder produced by the combustion of pulverised coal or lignite with or without co-combustion materials (as defined in EN 450-1) in energy generating plants and captured by mechanical or electrostatic precipitators

3.2

siliceous fly ash

(alumino-silicate fly ash)

fly ash where the essential chemical components are silicates, aluminates and iron oxides, expressed as SiO_2 , Al_2O_3 and Fe_2O_3 and which has pozzolanic properties

Note 1 to entry: It may be stored, supplied and used either in a wet or dry condition.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-