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Standards

Standard Recommendation
S.R. 21:2014+A1:2016

Guidance on the use of I.S. EN 13242:2002
+A1:2007 – Aggregates for unbound and
hydraulically bound materials for use in
civil engineering work and road
construction

S.R. 21:2014+A1:2016

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

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Contents	Page
Foreword	2
Introduction.....	4
1 Scope.....	5
2 Terms and definitions	5
3 Requirements of I.S. EN 13242:2002+A1:2007	6
3.1 General	6
3.2 Geometric requirements	6
3.2.1 Aggregate sizes (4.2 of I.S. EN 13242:2002+A1:2007)	6
3.2.2 Sieve sizes	7
3.3 Chemical requirements.....	11
3.3.1 Total sulfur (6.3 of I.S. EN 13242:2002+A1:2007)	11
3.4 Durability requirements - Resistance to freezing and thawing (7.3 of I.S. EN 13242:2002+A1:2007).....	12
3.5 Evaluation of conformity	12
3.5.1 General	12
3.5.2 Initial type test	12
3.5.3 Factory production control.....	12
3.5.4 Knowledge of the raw material (Annex C.3.4 of I.S. EN 13242:2002+A1:2007)	12
3.5.5 Frequency of sampling and testing (Annex C.5.3 of I.S. EN 13242:2002+A1:2007)	13
3.6 Designation and description (Clause 9 of I.S. EN 13242:2002+A1:2007).....	13
3.7 Marking and labelling information	14
4 Provisions of the EU Construction Products Regulation	14
Annex A (informative) Guidance for specifying aggregates for pipe bedding, haunching and surrounding material.....	17
Annex B (informative) Guidance for specifying aggregates for backfilling of filter drains.....	18
Annex C (informative) Guidance for specifying aggregates for general fill material.....	19
Annex D (informative) Guidance for specifying aggregates for unbound sub-bases for road pavements	20
Annex E (informative) Guidance for specifying aggregates for unbound granular fill (hardcore) for use under concrete floors and footpaths.....	21
E.1 Introduction.....	21
E.1.1 Main changes to Annex E $\text{\textcircled{A1}}$ between S.R. 21:2002+A1:2007 and S.R. 21:2014+A1:2016 $\text{\textcircled{A1}}$	21
E.2 Material properties	22
E.2.1 General	22
E.2.2 Geometric properties	23
E.2.3 Aggregate type	23
E.2.4 Geological, chemical and petrographic assessment	27
E.2.5 $\text{\textcircled{A1}}$ Multiple-product testing requirements	29
E.2.6 $\text{\textcircled{A1}}$ Competent Person (Professional Geologist) $\text{\textcircled{A1}}$ statement of compliance	29
E.3 Procedures for the production of granular sub-base.....	29
E.3.1 Evaluation of conformity	29
E.3.2 Sampling and Testing Plan.....	30
E.3.3 Traceability.....	30
Annex F (informative) Guidance for specifying aggregates for cement bound materials	31
Bibliography.....	32

Foreword

^{A1} This Standard Recommendation (S.R.) has been prepared by the Aggregates Panel of the Roads Standards Committee, NSAI.

The marks "^{A1} ^{A1}" indicates where an amendment in the text has been made.

S.R. 21:2014 revised S.R. 21:2004+A1:2007.

This document includes Amendment 1, prepared by the Aggregates Panel of the Roads Standards Committee, NSAI in conjunction with members of the Steering Group on Radon Preventative Measures in new buildings set up under the Governments National Radon Control Strategy (NRCS). ^{A1}

The Standard I.S. EN 13242:2002+A1:2007 is the Irish adoption of EN 13242:2002+A1:2007 "Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction". I.S. EN 13242 is one of a series of harmonised European product standards (hENs) dealing with aggregates, prepared by Technical Committee TC/154 of the European standards body (CEN).

CEN/TC 154 published the following standards in 2013 which NSAI adopted as Irish Standards, however these standards were subsequently withdrawn:

- I.S. EN 13242:2013,
- I.S. EN 12620:2013,
- I.S. EN 13043:2013,
- I.S. EN 13139:2013,
- I.S. EN 13383-1:2013,
- I.S. EN 13450:2013,
- I.S. EN 16236:2013.

The following previous editions of the standards have been reinstated as Irish Standards and are, at the time of publication of this S.R. the current versions, i.e.:

- I.S. EN 13242:2002+A1:2007,
- I.S. EN 12620:2002+A1:2008,
- ^{A1} I.S. EN 13043:2002, including AC:2004;
- I.S. EN 13139:2002, including AC:2004;
- I.S. EN 13383-1:2002, including AC:2004;
- I.S. EN 13450:2002 including AC:2004.



The main amendments include the following:

- the definition of mudrock and Professional Geologist, and
- revisions to Annex E. ^{A1}

S.R. 21 is one of a series published by the NSAI to provide National Guidance on the use of I.S. EN 13242:2002+A1:2007 and the other aggregate standards. NSAI intend to review this S.R. on publication from CEN/TC 154 of a planned revision of EN 13242:2002+A1:2007.

The recommendations are expressed mostly in tabular form, and the user can select the relevant categories dependent on the end-use requirement of the aggregates.



Guidance on the other harmonised European product Standards in the series is given in the following  :

S.R. 16 *Guidance on the use of I.S. EN 12620:2002, Aggregates for concrete*

S.R. 17 *Guidance on the use of I.S. EN 13043:2002, Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas*

S.R. 18 *Guidance on the use of I.S. EN 13139:2002, Aggregates for mortar*

Evaluation of conformity comprises initial type testing (ITT) and factory production control (FPC).

The Construction Products Regulation (EU) No. 305/2011 (CPR) was adopted in 2011 but applies in full from 1st July 2013. The CPR repeals the Construction Products Directive (EU) No. 89/106/EEC (CPD). The CPR introduces stricter and more transparent procedures (than the CPD) for the marketing of construction products. In brief, it requires manufacturers, when placing construction products on the market which are covered by harmonised European product standards (hENs) to make a Declaration of Performance (DoP) for the product, and affix the CE mark.

This S.R. is published to provide guidance only and does not purport to include all the necessary provisions of a contract. Users are responsible for the correct application of the requirements of I.S. EN 13242:2002+A1:2007.

Introduction

I.S. EN 13242:2002+A1:2007 specifies the properties of aggregates for use in unbound and hydraulically bound materials. ^{A1} ^{A1}

I.S. EN 13242:2002+A1:2007 only covers aggregates and does not refer to other constituents of unbound and hydraulically bound materials, e.g. selected cohesive materials or pulverised fly ash used for fill.

Specifiers should select I.S. EN 13242:2002+A1:2007 categories for properties that are relevant to the particular end-use of an aggregate. I.S. EN 13242:2002+A1:2007 specifies a range of categories for properties to enable users to select appropriate limiting values for the wide range of aggregates used in unbound and hydraulically bound materials produced in Europe. In most instances, provision is also made for producers to identify a “declared value” for properties when the value is outside indicated categories.

Annexes A, B, C, D and F of this S.R. provide guidance for the specification of aggregate properties for various end uses, within the ranges permitted in I.S. EN 13242:2002+A1:2007 and equivalent to those currently specified in Ireland, by reference to the relevant National Roads Authority (NRA) Specification for Road Works.

^{A1} NOTE 1 The NRA now the TII – Transport Infrastructure Ireland ^{A1}

Annex E has been revised in line with the recommendations of the Report of the Pyrite Panel 2012 and the knowledge and experience gained, since 2007, on pyrite. Annex E gives recommendations for specifying material properties ^{A1} ^{A1} of unbound granular fill (commonly known as hardcore) for use under concrete floors and footpaths.

^{A1} NOTE 2 ^{A1} Clause numbers, table numbers, and annexes refer to ^{A1} S.R. 21:2014+A1:2016 ^{A1} however, where references are relevant to other documents including I.S. EN 13242:2002+A1:2007, the relevant document for reference is specified, for clarity.

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GUIDANCE ON THE USE OF I.S. EN 13242:2002+A1:2007– AGGREGATES FOR UNBOUND AND HYDRAULICALLY BOUND MATERIALS FOR USE IN CIVIL ENGINEERING WORK AND ROAD CONSTRUCTION

1 Scope

This Standard Recommendation $\boxed{A_1}$ $\langle A_1 \rangle$ gives advice on the use of I.S. EN 13242:2002+A1:2007 in Ireland. $\boxed{A_1}$ $\langle A_1 \rangle$

$\boxed{A_1}$ NOTE I.S. EN 13242:2002+A1:2007 specifies the properties of aggregates obtained by processing natural, manufactured or recycled materials for hydraulically bound and unbound materials for civil engineering work and road construction. $\langle A_1 \rangle$

Guidance on manufactured aggregates is not covered under the scope of this Standard Recommendation.

2 Terms and definitions

Reference I.S. EN 13242:2002+A1:2007, Clause 3, for relevant terms and definitions.

For the purpose of this document, the following terms and definitions also apply:

$\boxed{A_1}$ Competent Person (Professional Geologist)

person possessing sufficient training, experience and knowledge appropriate to the nature of the work to be undertaken having regard to the task he or she is required to perform and taking into account the complexity of the work

Note 1 to entry: In the context of this S.R., the competent person will be listed as a Professional Member of the Institute of Geologists of Ireland, or an equivalent professional body, with an established record of a minimum of 5 years of practical assessment of geological resources, with experience of quarries and aggregate deposits and assessment of aggregates for proposed end-use suitability. $\langle A_1 \rangle$

framboidal pyrite

form of pyrite that typically occurs as loosely packed clusters of very small sized crystals of constituent pyrite microcrystallites <1 micron in diameter

$\boxed{A_1}$ $\langle A_1 \rangle$

$\boxed{A_1}$ $\langle A_1 \rangle$

reactive pyrite

pyrite in a form that is readily oxidised

$\boxed{A_1}$ sedimentary mudrock

lithified argillaceous sedimentary rocks comprised significantly of clay mineral particles $\langle A_1 \rangle$

$\boxed{A_1}$ T0 Struc

suitably graded structural unbound granular fill (hardcore) material (0/125 mm) for use at depths greater than 900 mm below the radon barrier/Damp Proof Membrane (DPM)

T1 Struc

structural unbound granular fill (hardcore) material is an all in graded aggregate (0-32 mm) or gravel (0/40 mm) to facilitate placing and compactability

T2 Perm

suitably graded unbound granular fill (hardcore) material (4/40 mm) to facilitate the free movement of gas within the hardcore layer

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