This is a free page sample. Access the full version online.

NSAI Standards

Standard Recommendation
S.R. 16:2016

Guidance on the use of I.S. EN 12620:2002 +A1:2008 - Aggregates for concrete

© NSAI 2016 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

S.R. 16:2016

Incorporating amendments/corrigenda issued since publication:

		Published	Withdrawn
Revises	S.R. 16:2004	29/07/2004	16/12/2016

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 is based on:
S.R. 16:2016

Published:
16 December, 2016

This document was published under the authority of the NSAI and comes into effect on:
16 December, 2016

ICS number:
91.100.30

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

This is a free page sample. Access the full version online.

Contents

Page

Foreword 3

Introduction 4

1 Scope 4

2 Terms and definitions 5

3 Requirements of I.S. EN 12620:2002+A1:2008 5
3.1 General 5
3.2 Geometric requirements 5
3.2.1 Aggregate nominal sizes for coarse, fine and all-in aggregate (I.S. EN 12620:2002 +A1:2008, Clause 4.2) 5
3.2.2 Sieve sizes for grading specifications for coarse, fine and all-in aggregate 6
3.2.3 Grading requirements for coarse, fine and all-in aggregate (I.S. EN 12620:2002+A1:2008, Clause 4.3) 7
3.2.4 Grading requirements for filler aggregate (I.S. EN 12620:2002+A1:2008, Clause 4.3.6) 10
3.2.5 Fines quality (I.S. EN 12620:2002+A1:2008, Clause 4.7 and Annex D) 10
3.3 Physical requirements 11
3.3.1 Particle density/water absorption (I.S. EN 12620:2002+A1:2008, Clauses 5.5 and 5.6) 11
3.3.2 Freeze/thaw resistance (I.S. EN 12620:2002+A1:2008, Clause 5.7.1) 11
3.3.3 Drying shrinkage (I.S. EN 12620:2002+A1:2008, Clause 5.7.2) 11
3.4 Chemical requirements 11
3.4.1 Chlorides (I.S. EN 12620:2002+A1:2008, Clause 6.2) 11
3.4.2 Constituents which alter the rate of setting and hardening of concrete (I.S. EN 12620:2002+A1:2008, Clause 6.4.1) 12
3.5 Geological and Petrographical requirements (I.S. EN 12620:2002+A1:2008, Clause 8.1 and Annex H, Clause H.3.3.) 12
3.5.1 General 12
3.5.2 Knowledge of the raw material 12
3.5.3 Ongoing finished product testing 12
3.6 Evaluation of conformity 12
3.6.1 General 12
3.6.2 Initial type test (I.S. EN 12620:2002+A1:2008, Clause 7.2) 13
3.6.3 Factory production control (I.S. EN 12620:2002+A1:2008, Clause 7.3 and Annex H) 13
3.6.4 Frequency of sampling and testing (I.S. EN 12620:2002+A1:2008, Annex H, Clause H.5.3 and Tables H.1, H.2, H.3) 13
3.6.5 Multiple product testing 14
3.7 Designation and description of aggregates (I.S. EN 12620:2002+A1:2008, Clause 8.1) 14
3.8 Marking and labelling (I.S. EN 12620:2002+A1:2008, Clause 9) 15

4 Provisions of the EU Construction Products Regulation 15

Annex A (informative) Guidance for specifying aggregates for concrete for general use 17
A.1 Introduction 17

This is a free page sample. Access the full version online.

Annex B (informative) Guidance for specifying aggregates for concrete for some particular aggregate sources and/or end uses (other than for general use) 20
B.1 Introduction 20

Annex C (informative) Guidance on the Geological and petrographic assessment of the aggregate 23
C.1 Introduction 23
C.2 Geological assessment of the raw material (i.e. the quarry deposit) 23
C.3 Petrographic assessment of the finished aggregate product 23
C.3.1 Competent Person (Professional Geologist) Statement of compliance 23

Bibliography 24

This is a free page sample. Access the full version online.

Foreword

This Standard Recommendation is a revision of S.R. 16:2004 and makes recommendations for I.S. EN 12620:2002+A1:2008. The document has been prepared under the direction of the Aggregates Panel of the NSAI's Roads Standards Committee in conjunction with the Masonry Panel of the NSAI's Concrete Standards Consultative Committee.

S.R. 16:2016 is intended to be used in conjunction with I.S. EN 12620:2002+A1:2008.

I.S. EN 12620:2002+A1:2008 specifies requirements for aggregates for concrete, and was prepared by CEN Technical Committee 154. Attention is drawn to the fact that I.S. EN 12620:2002+A1 2008 takes into account the requirements of the European Commission mandate, M125, Aggregates, given under the EU Construction Products Directive (89/106/EEC), see Clause 4.

Guidance on other European Standards for aggregates is given in the following NSAI publications:

- 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.

- S.R. 21 Guidance on the use of I.S. EN 13242:2002 - Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction.

In Ireland to date, coarse aggregates for which a Polished Stone Value (PSV) of 58 or higher is declared by the manufacturer are subject to a system of Assessment and Verification of Constancy of Performance (AVCP) at 2+, this recommendation remains in S.R. 16:2016, see Clause 4.

S.R. 16:2016 additionally recommends that in Ireland the AVCP system for all aggregates under the scope of I.S. EN 12620:2002+A1:2008 and S.R. 16 is System 2+. This additional recommendation applies only from 1st January 2018.

This document does not purport to include all the necessary provisions of a contract and the user is responsible for its correct application. This document is not to be regarded as an Irish Standard.

NOTE Clause numbers, table numbers and annexes refer to S.R. 16:2016. Where references are relevant to other documents including I.S. EN 12620:2002+A1:2008, the relevant document for reference is specified, for clarity.

This is a free page sample. Access the full version online.

Introduction

S.R. 16:2016 provides advice on the use of I.S. EN 12620:2002+A1:2008 in Ireland and recommends values/categories for aggregate properties within the ranges permitted in I.S. EN 12620:2002+A1:2008 for end use applications.

I.S. EN 12620:2002+A1:2008 specifies the requirements for aggregates with an oven dried particle density greater than 2,00 Mg/m^3 (2 000 kg/m^3) for all concrete, including concrete conforming to I.S. EN 206, concrete for general use including readymix concrete products, concrete used in roads and other pavements, precast concrete products, including concrete masonry units (e.g. blocks) and precast concrete paving.

I.S. EN 12620:2002+A1:2008 lists aggregate values/categories for properties and Annex A of S.R. 16:2016 recommends appropriate aggregate values/categories for relevant properties for general use in Ireland.

For particular aggregate sources and/or end uses, specifiers may need to give different and/or additional requirements to those recommended in Annex A. Therefore, some recommended I.S. EN 12620:2002+A1:2008 aggregate values/categories for particular aggregate sources and/or end uses are given in Annex B. For other special end uses and/or sources not listed in Annex B, appropriate values/categories should be specified for the particular properties.

1 Scope

S.R. 16:2016 gives guidance on the use of I.S. EN 12620:2002+A1:2008 which specifies the properties of aggregates and filler aggregates obtained by processing natural, manufactured or recycled materials and mixtures of these aggregates for use in concrete. I.S. EN 12620:2002+A1:2008 applies to aggregates having an oven dried particle density greater than 2 000 kg/m^3 for all concrete, including:

- concrete conforming to I.S. EN 206,
- readymix concrete products,
- concrete used in roads and other pavements,
- precast concrete products, including concrete masonry units and precast concrete paving.

S.R. 16:2016 provides guidance for natural aggregates and recycled concrete aggregates only.

S.R. 16:2016 does not provide guidance for recycled aggregates other than recycled concrete aggregates or for manufactured aggregates.

NOTE Lightweight aggregates for concrete are covered by I.S. EN 13055-1.

SAI GLOBAL

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