



Irish Standard
I.S. EN 14487-1:2022

Version 2.00

Sprayed concrete - Part 1: Definitions, specifications and conformity

I.S. EN 14487-1:2022 V2.00

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National Foreword

I.S. EN 14487-1:2022 V2.00 is the version of the NSAI adopted European document EN 14487-1:2022, *Sprayed concrete - Part 1: Definitions, specifications and conformity*, including any Corrections, Amendments etc. to EN 14487-1:2022.

This normative document by CEN/CENELEC the elaboration of which includes a public enquiry, followed by a Formal Vote of CEN/CENELEC national members and final ratification. This European Standard is published as an identical national standard and every conflicting national standard will be withdrawn. The content of a European Standard does not conflict with the content of any other EN (and HD for CENELEC).

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

EN 14487-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2022

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Supersedes EN 14487-1:2005

English Version

Sprayed concrete - Part 1: Definitions, specifications and conformity

Béton projeté - Partie 1 : Définitions, spécifications et conformité

Spritzbeton - Teil 1: Begriffe, Festlegungen und Konformität

This European Standard was approved by CEN on 2 October 2022.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents		Page
European foreword		4
Introduction		5
1	Scope.....	6
2	Normative references.....	6
3	Terms and definitions.....	8
3.1	Mix component	8
3.2	Product	10
3.3	Process.....	11
3.4	Properties.....	12
3.5	Execution	13
3.6	Operative	13
3.7	Test and inspection	14
4	Classification.....	14
4.1	Consistence of wet mix.....	14
4.2	Exposure classes	14
4.3	Young sprayed concrete	14
4.4	Compressive strength.....	15
4.5	Fibre reinforced sprayed concrete	16
4.5.1	General.....	16
4.5.2	Residual strength classes.....	16
4.5.3	Energy absorption capacity.....	17
5	Requirements for sprayed concrete	18
5.1	Requirements for constituent materials.....	18
5.2	Requirements for sprayed concrete composition	19
5.2.1	General.....	19
5.2.2	Concrete composition	20
5.3	Requirements on the basic mix	20
5.4	Requirements for the fresh sprayed concrete.....	21
5.5	Requirements for hardened sprayed concrete.....	21
6	Specification for sprayed concrete	22
6.1	General.....	22
6.2	Data for specifying designed mix	23
6.2.1	Basic data.....	23
6.2.2	Additional data	23
6.3	Data for specifying prescribed mix	24
6.3.1	Basic data.....	24
6.3.2	Additional data	24
7	Assessment of conformity.....	24
7.1	General.....	24
7.2	Inspection categories	25
7.3	Preconstruction testing.....	25
7.4	Production control	27
7.4.1	General.....	27
7.4.2	Constituent materials control	27

7.4.3	Control of basic mix	30
7.4.4	Control of sprayed concrete properties	30
7.5	Conformity criteria	33
7.5.1	General	33
7.5.2	Additional for fibre reinforced sprayed concrete.....	34
Annex A	(informative) Guidelines for definitions, specification and conformity for sprayed concrete.....	36
A.1	Introduction	36
A.2	Scope	36
A.3	Classification	36
A.3.1	Guidance related to exposure classes	36
A.3.2	Fibre reinforced sprayed concrete.....	36
A.4	Guidance for sprayed concrete.....	38
A.4.1	Constituent materials.....	38
A.4.2	Guidance for the sprayed concrete composition	38
A.5	Specification of sprayed concrete.....	39
A.6	Assessment of conformity	39
	Bibliography	43

European foreword

This document (EN 14487-1:2022) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by SN.

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 May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14487-1:2005.

In comparison with the previous edition, the following technical modifications have been made:

- Table 3 has been added;
- Table 13 has been modified;
- Normative references have been updated.

This document has taken EN 206 as a basis. Some clauses which apply to sprayed concrete refer to EN 206 because of their importance. Other clauses have been modified to meet the specific requirements of sprayed concrete.

This document is only operable with product standards for constituent materials (i.e. cement, aggregates, additions, admixtures, fibres and mixing water) and related test methods for sprayed concrete which form the package defined below. For this reason, the latest date of withdrawal of national standards (DOW) conflicting with this document is determined by TC 104 to be DAV + 6 months.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document will be applied in Europe under different climatic and geographical conditions, different levels of protection and under different, well-established, regional traditions and experience. Classes for concrete properties have been introduced to cover this situation. Where such general solutions were not possible, the relevant clauses contain permission for the application of EN 206 or other standards valid in the place of use.

This document incorporates rules for the use of constituent materials that are covered by European Standards. Other by-products of industrial processes, recycled materials, etc. are in current use based on local experience. Until European specifications for these materials are available, this document will not provide rules for their use, but instead refers to the recommendations given in EN 206 to apply national standards or provisions valid in the place of use of the concrete.

This document defines tasks for the specifier, producer and user. For example, the specifier is responsible for the specification of concrete, Clauses 5 and 6 and the producer is responsible for conformity and production control, Clause 7. The user is responsible for placing the concrete in the structure. In practice there may be several different parties specifying requirements at various stages of the design and construction process, e.g. the client, the designer, the contractor, the concreting sub-contractor. Each is responsible for passing the specified requirements, together with any additional requirements, to the next party in the chain until they reach the producer. In the terms of this document, this final compilation is known as the “specification”.

Further explanations and guidance on the application of this document are given in Annex A.

1 Scope

This document is applicable to sprayed concrete to be used for repair and upgrading of structures, for new structures and for strengthening of ground.

This document covers:

- classification related to consistence of wet mix;
- environmental exposure classes; young, hardened and fibre reinforced concrete;
- requirements for constituent materials, for concrete composition and for basic mix, for fresh and hardened concrete and all types of fibre reinforced sprayed concrete;
- specification for designed and prescribed mixes;
- conformity.

This document is applicable to wet mix as well as dry mix sprayed concrete. The substrates to which sprayed concrete can be applied include:

- ground (rock and soil);
- sprayed concrete;
- different types of formwork;
- structural components constituted of concrete, masonry and steel;
- drainage materials;
- insulating materials.

Additional or different requirements may be needed for applications not within this document, for instance-refractory uses.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 197-1, *Cement — Part 1: Composition, specifications and conformity criteria for common cements*

EN 206:2013+A2:2021, *Concrete — Specification, performance, production and conformity*

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

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

EN 934-5:2007, *Admixtures for concrete, mortar and grout — Part 5: Admixtures for sprayed concrete — Definitions, requirements, conformity, marking and labelling*

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