Concrete - Part 9: Additional Rules for Self-compacting Concrete (SCC)

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Béton - Partie 9 : Règles complémentaires pour le béton auto-placant

Beton - Teil 9: Ergänzende Regeln für selbstverdichtenden Beton (SVB)

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Foreword

This document (EN 206-9:2010) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard is additional to EN 206-1:2000 and it gives the rules for self-compacting concrete (SCC). Common rules are not repeated in this European Standard and as a consequence, it has to be used with EN 206-1:2000. When EN 206-1:2000 is revised, this European Standard will be merged into the main document.

The numbering of this European Standard follows EN 206-1:2000.

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Introduction

Self-compacting concrete (SCC) is an evolving technology and practices vary. This European Standard sets common requirements, but where this is not possible the relevant clause contains permission for the application of national standards or provisions valid in the place of use of the concrete.

This European Standard 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 self-compacting 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 national standards or provisions valid in the place of use of the concrete.

In tables, notes and footnotes in this European Standard are normative unless stated otherwise; other notes and footnotes are informative.

Further explanations and guidance on the application of this European Standard are given in other documents valid in the place of use.

Further guidance on the production and other aspects of SCC is given in The European Guidelines for Self-Compacting Concrete – Specification, Production and Use , see also Annex D.

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1 Scope

This European Standard applies to SCC for structures cast in situ, precast structures, and structural precast products for buildings and civil engineering structures.

This European Standard applies to SCC which is self-compacting by gravity to retain no appreciable amount of entrapped air other than entrained air. This Standard applies to normal-weight concrete. Experience with SCC containing light-weight or heavy-weight aggregate and fibres is limited. Some but not all provisions of this Standard apply for these forms of SCC but the requirements have to be determined on a case by case basis.

The SCC may be mixed on site, ready-mixed concrete or produced in a plant for precast concrete products.

In addition to those in EN 206-1:2000, this European Standard specifies requirements for:

— the constituent materials of SCC;

— the properties of fresh and hardened SCC and their verification;

— the limitations for SCC composition;

— the specification of SCC;

— the factory production control procedures;

— the conformity criteria.

Other European Standards for specific products e.g. precast products or for processes within the field of the scope of this European Standard may require or permit deviations from this European Standard.

The limitations described in the scope of EN 206-1:2000 apply to SCC conforming to this European Standard.

This European Standard does not cover health and safety requirements for the protection of workers during production and delivery of concrete.

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 206-1:2000, *Concrete - Part 1: Specification, performance, production and conformity*

FprEN 12350-8, *Testing fresh concrete - Part 8: Self-compacting concrete – Slump-flow test*

FprEN 12350-9, *Testing fresh concrete - Part 9: Self-compacting concrete – V-funnel test*

FprEN 12350-10, *Testing fresh concrete - Part 10: Self-compacting concrete – L box test*

FprEN 12350-11, *Testing fresh concrete - Part 11: Self-compacting concrete – Sieve segregation test*

FprEN 12350-12, *Testing fresh concrete - Part 12: Self-compacting concrete – J-ring test*

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