

LOCATION OF REQUIREMENTS RELATING TO THE NATIONAL IMPLEMENTATION OF EN206-1

Table 1 gives the title of the documents that contain the general national requirements, together with an English translation of the title. Any person wishing to design and specify concrete in another CEN Member Country should consult the documents cited in Table 1.1. Please note that the documents will be written in the national language(s) of the CEN Member Country. It should also be noted that the original survey was conducted during 2005 – 2006 and the answers reflect practice at that time, which may not be the same as current practice. However most but not all ERMCO members have updated or confirmed that the tables are current.

Table 2 gives the title of documents that refer to requirements for minimizing the risk of alkali-silica reaction in concrete.

Table 1 Location of national requirements (general)

CEN Member Country ^{A)}	Location of national requirements
Austria	<p>ÖNORM B 4710-1: Beton - Teil 1: Festlegung, Herstellung, Verwendung und Konformitätsnachweis (Regeln zur Umsetzung der ÖNORM EN 206-1 für Normal- und Schwerbeton) Concrete — Part 1: Specification, production, use and verification of conformity (Rules for the implementation of ÖNORM EN 206-1 for normal and heavy concrete)</p> <p>ÖNORM B 4710-2: Beton - Teil 2: Gefügedichter Leichtbeton mit einer Mindesttrockenrohichte von 800 kg/m³ — Festlegung, Herstellung, Verwendung und Konformitätsnachweis (Regeln zur Umsetzung der EN 206-1 für Leichtbeton) Concrete — Part 2: Lightweight concrete with closed structures and a minimum dry density of 800 kg/m³ — Specification, production, use and proof of conformity (Rules for the implementation of ÖNORM EN 206-1 for lightweight concrete)</p>
Belgium	<p>NBN B 15-001: Supplément à la NBN EN 206-1 – Béton – Spécification, performances, production et conformité NBN B 15-001: Aanvulling op NBN EN 206-1 – Beton – Eisen, gedraging, vervaardiging en conformiteit (Supplement to NBN EN 206-1: Concrete – Specification, performance, production and conformity)</p>
Cyprus	No response received
Czech Republic	ČSN EN 206-1 Změna Z3 (May 2008) – National Annex - only in Czech language
Denmark	<p>DS 2426: Beton – Materialer – Regler for anvendelse af EN 206-1 i Danmark (Concrete – Materials – Rules for the application of EN 206-1 in Denmark)</p>
Estonia	No response received
Finland	Suomen rakentamismääräyskokoelma, B4 Betonirakenteet, Liite 3: Kansallinen liite standardiin SFS-EN 206-1 (National Building Code of Finland, B4 Concrete structures, Annex 3: national Annex to standard SFS-EN 206-1)

	Informative Guidance document: Betoninormit 2004, Suomen Betoniyhdistys (Concrete Code, Finnish Concrete Association)
France	National annex included in the NF EN 206-1 standard
Germany	DIN 1045-2: Tragwerke aus Beton, Stahlbeton und Spannbeton – Teil 2: Beton – Festlegung, Eigenschaften, Herstellung und Konformität –Anwendungsregeln zu DIN EN 206-1 (DIN 1045-2: Concrete, reinforced and prestressed concrete structures Part 2: Concrete - Specification, properties, production and conformity - Application rules for DIN EN 206-1)
Greece	No response received
Hungary	No response received
Iceland	No response received
Ireland	National Annex; published with I.S. EN 206-1 as a single document.
Italy	UNI 11104: Calcestruzzo - Specificazione, prestazione produzione e conformità Istruzioni complementari per l'applicazione della EN 206-1 (Concrete – Specification, performance, production and conformity, Additional provisions for the application of EN 206-1)
Latvia	No response received
Lithuania	No response received
Luxembourg	DNA EN 206: Document National d'Application luxembourgeois de l'EN 206: Béton – Partie 1: Spécification, performances, production et conformité (DNA EN 206: Luxemburgish national application document of the EN 206-1: Concrete - Part 1: specification, performance, production and conformity)
Malta	There are no national provisions, but in the past, local industry has used recommendations in European, British or German standards
Netherlands	NEN 8005: 2004: Nederlandse invulling van NEN-EN 206-1: Beton - Deel 1: Specificatie, eigenschappen, vervaardiging en conformiteit (Dutch supplement to NEN-EN 206-1: Concrete - Part 1: Specification, performance, production and conformity)
Norway	NS-EN 206-1 National Annex. Available in English.
Poland	PN-EN 206-1 Beton Część 1. Wymagania, właściwości, produkcja i zgodność (PN-EN 206-1 Concrete. Part 1: Specification, performance, production and conformity)and national annex PN-B-06265 published as a single document..
Portugal	The Portuguese requirements are in the National Annex to NP EN 206-1 and to NP ENV 13670-1 and in the following National Civil Engineering Laboratory (LNEC) specifications, referenced in the NA of NP EN 206-1 LNEC E 461: 2004 – Metodologia para prevenir reacções expansivas internas (Methodology for avoiding internal expansive reactions) LNEC E 464: 2005 – Metodologia prescritiva para uma vida útil de 50 e 100 anos face às acções ambientais (Prescriptive methodology for a 50 and 100 years design working life under the environmental exposures) LNEC E 465: 2005 – Metodologia para estimar as propriedades de desempenho do betão que permitam satisfazer a vida útil de projecto de estruturas de betão armado ou pré-esforçado sob as exposições ambientais XC e XS (Methodology for estimating the concrete performance properties allowing to comply with the design working life of the reinforced or prestressed concrete structures under the environmental exposures XC and XS)

Slovakia	STN EN 206-1/NA Betón. Časť 1: Špecifikácia, vlastnosti, výroba a zhoda. Národná príloha STN EN 206-1/NA Concrete. Part 1: Specification, performance, production and conformity. National Annex (published as a single document in year 2009)
Slovenia	SIST 1026: Beton - 1.del: Špecifikacija, lastnosti, proizvodnja in skladnost – Pravila za uporabo SIST EN 206-1 (SIST 1026: Concrete – Part 1: Specification, performance, production and conformity – Rules for the implementation of SIST EN 206-1)
Spain	Spain has not adopted EN 206-1
Sweden	SS 13 70 03: 2008 Betong – Användning av EN 206-1 i Sverige (Concrete - Application of EN 206-1 in Sweden) Vägledning för val av exponeringsklass enligt SS-EN 206-1, Betongrapport nr 11, Svenska Betongföreningen (Guidance for selection of exposure class according to SS-EN 206-1, Concrete report No 11, Swedish Concrete Association)
Switzerland	SN EN 206-1: 2000: Beton – Teil 1 – Festlegung, Eigenschaften, Herstellung und Konformität (mit Nationalem Vorwort und Nationalem Anhang) (SN-EN 206-1: 2000: Concrete - Part 1: Specification, performance, production and conformity (with National Preface and National Annex)) SN EN 206-1: 2000/A1: 2004 – Beton – Teil 1: Festlegung, Eigenschaften, Herstellung und Konformität (SN EN 206-1: 2000/A2: 2005: Concrete - Part 1: Specification, performance, production and conformity) Ergänzung zum Nationalen Anhang NB der Norm SN EN 206-1:2000: Teil 1 – Verwendung von Zementen und Zusatzstoffen gemäss dem Prinzip der gleichwertigen Betonleistungsfähigkeit (in Arbeit) (Amendments to the National Annex of the SN EN 206-1: Part 1 - Use of cements and mineral additions according to the equivalent performance concept of concrete properties (in preparation)) Nationaler Anhang NC der Norm SN EN 206-1: 2000: Teil 1 – Anwendung des k-Wert Konzeptes gemäss dem Prinzip der gleichwertigen Betonleistungsfähigkeit (Application of the k-value concept according to the principle of the equivalent concrete performance) Neufassung der Ziffer 8.2.3.2 des Nationalen Anhangs zur Norm SN EN 206-1:2000 Beton – Teil 1: Festlegung, Eigenschaften, Herstellung und Konformität Neufassung der Tabelle NA.3 des Nationalen Anhangs vom 30.04.2009
Turkey	Does not yet have a national annex.
United Kingdom	BS 8500: Concrete Complementary British Standard to BS EN 206-1 Part 1: Method of specifying and guidance for the specifier Part 2: Specification for constituent materials and concrete
⁴⁾ None of the CEN affiliates chose to respond to this survey.	

CEN Member Country	Location of national requirements
Austria	ÖNORM B 3100: Beurteilung der Alkali-Kieselsäure-Reaktivität im Beton (Assessment of the alkali silica reactivity in concrete, Evaluation de la réactivité alcali-silice dans le béton)
Belgium	To prevent the alkali-silica reaction, at least one of the following measures has to be applied: <ul style="list-style-type: none"> • Limitation of the total alkali content of the concrete • Use of a low-alkali cement conform to NBN B 12-109 • Choose aggregates which are not potentially reactive • Take measures to restrict the water saturation of the concrete
Czech Republic	CSN EN 206-1: Zmena Z2 (paragraph NA.3)
Denmark	See Table 1
Finland	None
France	Guidelines: Recommandations pour la prévention des désordres dus à l'alcali-réaction, LCPC, juin 1994 (Recommendations for the prevention of damage by the alkali-aggregate reaction) – (available in English)
Germany	DAfStb-Richtlinie: Vorbeugende Maßnahmen gegen schädigende Alkalireaktion im Beton (Alkali-Richtlinie) (DAfStb-Guideline Preventive measures against deleterious alkali-reaction in concrete (Alkali-Guideline), 2007
Ireland	Alkali-Silica Reaction in Concrete, published by The Institution of Engineers of Ireland and The Irish Concrete Society, 2003. (IEI/ICS ASR Report)
Italy	UNI 8981- 2 Rev. 2006: Durability of concrete works and precast elements - Criteria for the avoidance of alkali-silica reaction (pop-out).
Luxembourg	DNA EN 206
Netherlands	NEN 8005: 2004 states in a note that if CUR Recommendation 89 (2002) <i>Measures to prevent concrete damage because of ASR</i> is adhered to, the requirement in 5.2.3.4 (..., actions shall be taken to prevent deleterious alkali-silica reaction using procedures of established suitability) in EN 206-1 has been fulfilled
Norway	The Norwegian Concrete Association, Publication NB 21. This Publication is normative according to the National Annex.
Poland	Nothing other than information in table 1.
Portugal	LNEC E 461: 2004: Metodologia para prevenir reacções expansivas internas (Methodology for avoiding internal expansive reactions)
Slovakia	STN EN 206-1/NA Betón. Časť 1: Špecifikácia, vlastnosti, výroba a zhoda. Národná príloha,, čl.5.2.3.4. STN EN 206-1/NA Concrete. Part 1: Specification, performance, production and conformity. National Annex, paragraph 5.2.3.4. More details on tests are provided in standard STN 72 1179 and STN 721160
Slovenia	None
Sweden	See Table 1 (SS 13 70 03)

Switzerland	SN EN 206-1: 2000: National Annex (Table 1.1, Ref. [1]). Amendments will be elaborated
United Kingdom	BS 8500-2 (see Table 1). More detailed guidance is provided in BRE Digest 330: Alkali-silica reaction in concrete