

Quality assured ready-mixed concrete



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For a list of Companies holding BSI Kitemark Certification go to www.kitemark.com, click on the 'Find it' tab, enter 'BS EN 206-1 and BS 8500' into the 'Business (Company, Service or Licensee number)' box and then press 'search'.



For a list of Companies holding QSRMC Certification go to www.qsrcm.co.uk and select 'QSRMC'.

October 2012 sees publication of the amended version of the British Standard for Concrete, BS 8500¹. Essentially the amendment addresses three important issues:

- Clarification of product conformity certification.
- Requirements for demonstrating that the risk of damaging alkali silica reaction is minimised.
- Revised guidance for pavement quality concrete subject to freezing and thawing.

Product conformity certification

Conformity assessment and accreditation are important parts of the nation's quality infrastructure. This is confirmed by the department for Business, Innovation and Skills (BIS) which is responsible for activity in this area and has produced guidance entitled *Conformity Assessment and Accreditation Policy in the United Kingdom*².

Conformity assessment is the demonstration that product being supplied actually meets the requirements specified or claimed. Concrete is generally specified by a wide range of requirements including designation, strength class, consistency class, minimum cement content, maximum water/cement ratio and other aspects in accordance with BS 8500. For

this reason conformity assessment requires technical expertise and, to be completely objective, should be carried out by a body independent of any party interested in the outcome of the assessment. This is United Kingdom Accreditation Service (UKAS) accredited third party conformity assessment and in the UK the third party should be either the Quality Scheme for Ready-Mixed Concrete (QSRMC) or as an equivalent, the BSI Kitemark Scheme for Ready-mixed concrete.

As the consequential cost of concrete not meeting its specified requirements will outweigh the basic materials cost many clients make third party conformity assessment certification mandatory.

The BS 8500 definition for product conformity certification has been revised, and includes a number of explanatory notes, as shown in the box (right). There is an industry view that this definition for product conformity certification does not adequately define accreditation, and that the definition should be more explicit.

Alkali silica reaction

A new Annex D to BS 8500: Part 2 gives the rules of application for use by producers to ensure that the risk of damaging alkali-silica reaction is minimised. This replaces ear-

lier references to BRE Digest 330³ wherein the historical basis for the rules can still be found.

Freezing and thawing

In response to the unusually severe winters of 2009/10 and 2010/11 the requirements have been changed to improve performance of concrete under exposure to high water saturation freezing and thawing, with and without de-icing agents, such as that used in external pavements.

Extract from BS 8500:2012¹

Product conformity certification is based on product testing and surveillance, and issued by an accredited third-party certification body in accordance with a documented quality system.

NOTE 1 Users of this part of BS 8500 are advised to consider the desirability of quality system assessment and registration against BS EN ISO 9001 by an accredited third-party certification body. Many certification bodies have this as a requirement of their product conformity certification. Further information on the provisions for assessment, surveillance and certification of production control can be found in BS EN 206-1:2000, Annex C.

NOTE 2 Users seeking assistance in identifying appropriate conformity assessment bodies or schemes may ask BSI to forward their enquiries to the relevant association.

NOTE 3 Attention is drawn to the Department for Business, Innovation & Skills policy document, *Conformity assessment accreditation policy*.

References

1. British Standards Institution. BS 8500 Concrete — Complementary British Standard to BS EN 206-1 — Part 1: 2006+A1 2012 Method of specifying and guidance for the specifier
Part 2: 2006+A1 2012 Specification for constituent materials and concrete
BSI, London, September 2012.
2. Department For Business Innovation & Skills. Conformity Assessment and Accreditation Policy in the United Kingdom. April 2012.
3. Building Research Establishment. Alkali-silica reaction in concrete. BRE Digest 330 (in four parts). Watford: Building Research Establishment, 2004

Specify concrete from BRMCA members

- BRMCA members have expertise in the manufacture and supply of ready-mixed concrete to guarantee performance.
- BRMCA members have rigorous product testing processes to ensure quality.
- BRMCA members have third-party product conformity certification such as BSI kitemark and QSRMC schemes.

www.brmca.org.uk