

## Xypex (UK) Ltd

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## Agrément Certificate

21/5972

Product Sheet 1 Issue 2

### XYPEX WATERTIGHT CONCRETE SYSTEM

#### XYPEX ADMIX C-500 NF

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Xypex Admix C-500 NF, an admixture used to provide water retaining properties and watertight concrete for basements, swimming pools, tunnels and culverts.

(1) Hereinafter referred to as 'Certificate'.

#### The assessment includes

##### Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

##### Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

##### Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



#### KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 29 July 2025

Originally certified on 11 November 2021

Hardy Giesler  
Chief Executive Officer

*This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.*

*The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).*

*Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

*The Certificate should be read in full as it may be misleading to read clauses in isolation.*

*Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.*

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## SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

### Compliance with Regulations

In the opinion of the BBA, the use of Xypex Admix C-500 NF is not subject to the national Building Regulations.

### Additional Information

#### NHBC Standards 2025

In the opinion of the BBA, Xypex Admix C-500 NF, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 5.4 *Waterproofing of basements and other below ground structures*.

Unless it can be demonstrated that the water table is permanently below the underside of the slab, the product should be used in combination with either a Type A or C waterproofing protection where Grade 3 protection is required and the below ground wall retains more than 600 mm (measured from the top of the retained ground to the lowest finished floor level).

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

### Fulfilment of Requirements

The BBA has judged Xypex Admix C-500 NF to be satisfactory for use as described in this Certificate. The product has been assessed as an admixture for use in concrete mixes at an addition rate of 1.25% by weight of cement to provide water retaining properties and watertight concrete for basements, swimming pools, tunnels and culverts.

## ASSESSMENT

### Product description and intended use

The Certificate holder provided the following description for the product under assessment. Xypex Admix C-500 NF is a reactive crystalline admixture for incorporation in concrete to enhance:

- water retaining properties
- the watertightness and durability in its hardened state.

The product is supplied as a powder consisting of blended Portland cement and proprietary chemicals.

The use of the product with an air-entraining agent is outside the scope of this Certificate.

### Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessment is shown below.

#### 1 Mechanical resistance and stability

Data were assessed for the following characteristics.

##### 1.1 Mechanical properties

1.1.1 Results of mechanical properties tests are given in Table 1.

**Table 1 Mechanical properties**

System assessed	Assessment method	Requirement	Result
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Compressive strength to BS EN 12390-3 : 2002	Value achieved	
	24 hours		
	Control System		16.5 MPa 16.5 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Compressive strength to BS EN 12390-3 : 2002	Value achieved	
	7 days		
	Control System		46.7 MPa 48.3 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Compressive strength to BS EN 12390-3 : 2002	Value achieved	
	28 days		
	Control System		60.5 MPa 58.7 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Flexural strength to BS EN 12390-5 : 2002	Value achieved	
	24 hours		
	Control System		2.4 MPa 2.0 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Flexural strength to BS EN 12390-5 : 2002	Value achieved	
	7 days		
	Control System		4.7 MPa 4.6 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Flexural strength to BS EN 12390-5 : 2002	Value achieved	
	28 days		
	Control System		6.2 MPa 5.6 MPa
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Modulus of elasticity to BS 1881-121 : 1983	Value achieved	
	28 days		
	Control System		40500 MPa 40000 MPa

(1) Xypex Admix C-500 NF mixed at an addition of 1.25% by weight of cement.

(2) Control water cement ratio of 0.44, system water cement ratio of 0.43.

1.1.2 The specific effect of the product on these properties, for a particular mix and site conditions, must be evaluated through site-specific trials prior to use.

1.1.3 The compressive strength of concrete containing the product is similar to that of an equivalent plain concrete.

1.1.4 The flexural strength and static modulus of elasticity of concrete containing the product is similar to that of an equivalent plain concrete.

1.1.5 Results of setting characteristics and hardening tests of concrete designed to BS EN 480-1 : 2014 are given in Table 2 of this Certificate.

**Table 2 Setting characteristics**

System assessed	Assessment method	Requirement	Result
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Slump to BS EN 12350-2 : 2000	Value achieved	
	After 0 minutes		
	Control		S2
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Slump to BS EN 12350-2 : 2000	Value achieved	
	After 30 minutes		
	Control		S1
Concrete with Xypex Admix C-500 NF <sup>(1)(3)</sup>	Slump to BS EN 12350-2 : 2000	Value achieved	
	After 0 minutes		
	Control		S2
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Setting time to BS 5075-1 : 1982	Value achieved	
	Control		
	initial set		185 min
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Control		290 min
	final set		
	System		
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Setting time to BS 5075-1 : 1982	Value achieved	
	Control		215 min
	initial set		350 min
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Plastic density to BS EN 12350-6 : 2000	Value achieved	
	Control		2396 kg·m <sup>-3</sup>
	System		2423 kg·m <sup>-3</sup>
Concrete with Xypex Admix C-500 NF <sup>(1)(3)</sup>	Plastic density to BS EN 12350-6 : 2000	Value achieved	
	Control		2384 kg·m <sup>-3</sup>
	System		2385 kg·m <sup>-3</sup>
Concrete with Xypex Admix C-500 NF <sup>(1)(2)(3)</sup>	Air content in fresh concrete to BS EN 12350-7 : 2000	≤ 2.0% above control concrete	Pass
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Drying shrinkage to BS 1881-5 : 1970	Value achieved	
	Control		0.039%
	System		0.036%
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Wetting expansion to BS 1881-5 : 1970	Value achieved	
	Control		0.026%
	System		0.023%
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Bleeding to EN 480-4 : 1997	Test mix ≤ 50% of control mix	Pass

(1) Xypex Admix C-500 NF mixed at an addition of 1.25% by weight of cement.

(2) Control water cement ratio of 0.44, system water cement ratio of 0.43.

(3) Control water cement ratio of 0.51, system water cement ratio of 0.51.

1.1.6 The specific effect of the product on these properties, for a particular mix and site conditions, must be evaluated through site-specific trials prior to use.

1.1.7 The setting characteristics of concrete containing the product will be similar to an equivalent plain concrete. The setting time will depend on the concrete mix design used and the ambient temperature during placing and curing.

1.1.8 The drying shrinkage and wetting expansion of concrete containing the product is reduced compared to that of an equivalent plain concrete.

1.1.9 The water retention of concrete mixes containing the product will be greater when compared with equivalent plain concrete. The amount of water retention will depend on the concrete mix design used and ambient temperature during placing and curing.

## 2 Safety in case of fire

Not applicable.

## 3 Hygiene, health and the environment

Data were assessed for the following characteristics.

### 3.1 Water penetration and water vapour permeability

3.1.1 Results of water penetration and water vapour permeability tests are given in Table 3.

*Table 3 Water penetration and water vapour permeability*

System assessed	Assessment method	Requirement	Result
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Determination of water vapour resistivity to BS 3177 : 1959	Value achieved	
	Control		1168 MN·s·g <sup>-1</sup> ·m <sup>-1</sup>
	System		1266 MN·s·g <sup>-1</sup> ·m <sup>-1</sup>
Concrete with Xypex Admix C-500 NF <sup>(1)(3)</sup>	Determination of water permeability to BS EN 12390-8 : 2000	Value achieved	
	Taywood/Valenta calculation method		
	Control		2.77 x 10 <sup>-13</sup> m·s <sup>-1</sup>
	System		1.81 x 10 <sup>-13</sup> m·s <sup>-1</sup>

(1) Xypex Admix C-500 NF mixed at an addition of 1.25% by weight of cement.

(2) Control water cement ratio of 0.44, system water cement ratio of 0.43.

(3) Control water cement ratio of 0.51, system water cement ratio of 0.51.

3.1.2 The specific effect of the product on these properties, for a particular mix and site conditions, must be evaluated through site-specific trials prior to use.

3.1.3 On the basis of data assessed, concrete containing the product has a greater resistance to water penetration and a higher resistance to water vapour than the equivalent plain concrete.

3.1.4 The appropriate thickness for concrete with a specific resistivity to achieve a water vapour resistance of 250 or 500 MN·sg<sup>-1</sup> is given by:

$$\begin{aligned}\text{For } 250 \text{ MN}\cdot\text{sg}^{-1} & \quad t = 250 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1} / \text{vapour resistivity, or } t = 250 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1} / 5 \times \mu \\ \text{For } 500 \text{ MN}\cdot\text{sg}^{-1} & \quad t = 500 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1} / \text{vapour resistivity, or } t = 500 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1} / 5 \times \mu\end{aligned}$$

where:

$t$  = concrete thickness (m)

$\mu$  = water vapour resistance factor.

## 4 Safety and accessibility in use

Data were assessed for the following characteristics.

### 4.1 Reinforcement protection

4.1.1 Results of reinforcement protection tests are given in Table 4.

**Table 4 Reinforcement protection**

System assessed	Assessment method	Requirement	Result
Admix C-500 NF	Determination of water soluble chloride content to BS EN 480-10 : 1997	$\leq 0.1\%$	Pass
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Determination of the bond to steel to a BBA Method	Value achieved Control System	9048 N 6272 N

(1) Xypex Admix C-500 NF mixed at an addition of 1.25% by weight of cement.

(2) Control water cement ratio of 0.44, system water cement ratio of 0.43.

4.1.2 The specific effect of the product on these properties, for a particular mix and site conditions, must be evaluated through site-specific trials prior to use.

4.1.3 The Certificate holder has declared the chloride ion content of the product as  $\leq 0.1\%$ .

4.1.4 The Certificate holder has declared that the product complies with the corrosion behaviour requirements given in BS EN 934-1 : 2008, Clause 5.1, and is labelled accordingly.

4.1.5 Based on data assessed, the high level of alkalinity required to prevent corrosion of the reinforcement ( $\text{pH} > 13$ ) will not be adversely affected by the incorporation of the product in the concrete.

4.1.6 Corrosion of the reinforcement is normally caused by the ingress of chloride to the steel or by the reduction in alkalinity of the concrete by the diffusion of carbon dioxide. Based on data assessed, the reduced permeability of concrete containing the product will slow down diffusion of aggressive agents into the concrete and so provide improved protection against reinforcement corrosion.

## 5 Protection against noise

Not applicable.

## 6 Energy economy and heat retention

Not applicable.

## 7 Sustainable use of natural resources

Not applicable.

## 8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the product were assessed.

8.2 Specific test data were assessed as given in Table 5.

**Table 5 Durability**

System assessed	Assessment method	Requirement	Result
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Resistance to freeze/thaw to PD CEN/TS 12390-9 : 2016	No cracks or significant scaling vs control concrete	Pass
Concrete with Xypex Admix C-500 NF <sup>(1)(2)</sup>	Determination of the resistance to efflorescence of concrete to a BBA Method	No efflorescence observed	
	Control System		Pass Pass
Admix C-500 NF	Sodium oxide equivalent to BS EN 480-12 : 1998	$\leq$ Declared value	Pass

(1) Xypex Admix C-500 NF mixed at an addition of 1.25% by weight of cement.

(2) Control water cement ratio of 0.44, system water cement ratio of 0.43.

8.2.1 The specific effect of the product on these properties, for a particular mix and site conditions, must be evaluated through site-specific trials prior to use.

8.2.2 The Certificate holder's declared value of  $\leq 10\%$  must be used when calculating the contribution of the product to the total alkali content of a given concrete mix. In turn, this can be used to assess the susceptibility of that concrete to alkali-silica reaction.

8.2.3 Based on data assessed, the lower permeability of concrete containing the product will reduce the ingress of sulfates. If sulfate-resistant concrete is required, the advice of the Certificate holder must be sought, but such advice is outside the scope of this Certificate.

8.2.4 Use of the product will reduce the leaching of lime from the hydrated cement in the concrete.

8.2.5 Concrete containing the product has similar resistance to freeze/thaw to that of an equivalent plain concrete.

8.2.6 Concrete containing the product has greater resistance to carbon dioxide diffusion than an equivalent plain concrete.

### 8.3 Service life

8.3.1 Under normal service condition, concrete containing the product is more durable than an equivalent plain concrete provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 Where exposure to aggressive soil conditions or chemicals is anticipated, a full assessment of the site must be made. In these situations, the Certificate holder must be consulted on the suitability of the product, but such advice is outside the scope of this Certificate.

## PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

## 9 Design, installation, workmanship and maintenance

### 9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Concrete containing the product must be designed in accordance with BS EN 206 : 2013 and BS 8500-2 : 2015 for all normal types, including precast, pre-stressed, post-tensioned, ready-mixed, reinforced, slip formed, sprayed and pumped concretes.

9.1.3 The product is compatible with cement blends containing pulverized fuel ash, ground granulated blast-furnace slag and silica fume blends, as defined in BS EN 197-1 : 2011.

9.1.4 Structures built incorporating the product must be designed to the relevant sections of BS 8102 : 2022 and BS EN 1992-1-1 : 2004, BS EN 1992-1-2 : 2004 and BS EN 1992-3 : 2006, and their UK National Annexes.

9.1.5 Concrete mixes containing the product are suitable for Type B protection as described in BS 8102 : 2022, and can satisfy the requirements for all grades defined in Table 1 of that Standard. For Grade 3 (where control of water vapour is required), a mix with a sufficiently low vapour permeability must be provided, in combination with an adequate section thickness (see section 3.1.4 of this Certificate). The use of suitable ventilation, dehumidification or air-conditioning, appropriate to the intended use, must also be considered.

9.1.6 Basements for dwellings must be designed in accordance with the guidance given in the *Guidance Document — Basements for dwellings*<sup>(1)</sup>.

(1) Published by the Basement Information Centre, Product code: TBIC/007.

## 9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 Concrete mixes containing the product must not be placed at concrete temperatures of 5°C or below.

9.2.4 Concrete containing the product must be fully compacted.

9.2.5 The concrete must be cured strictly in accordance with BS EN 13670 : 2009, BS EN 1992-1-1 : 2004 and its UK National Annex, and the Certificate holder's recommendations (where site-specific information exists).

9.2.6 Penetrations of the concrete, such as pipe entries or formwork ties, must also be securely sealed to maintain watertightness. The Certificate holder can advise on suitable products, but such advice is outside the scope of this Certificate.

9.2.7 The product must be thoroughly dispersed in the mix so that a homogeneous mixture is achieved.

9.2.8 Admixtures must be evaluated before use and site trials carried out to establish the appropriate dose required.

9.2.9 A dosage of the product, within the parameter range of 1.0 and 1.5% by weight of cement, is added. The advice of the Certificate holder must be sought on dosage rates for particular applications but such advice is outside the scope of this Certificate.

9.2.10 Where the concrete is batched on site, care must be taken to ensure that adequate mix control is available.

9.2.11 Joints must be designed with waterstops as recommended in BS 8102 : 2022, to maintain the watertightness of the whole structure. The advice of the Certificate holder must be sought for particular applications, but such advice is outside the scope of this Certificate. Only waterstops that have been BBA-approved as being capable of satisfying the necessary grade of waterproofing protection must be used.

## 9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of Certificate holder's information and a user survey to investigate the performance of the product in service. To achieve the performance described in this Certificate, concrete mixes containing the product must be placed, compacted and cured by operatives with experience of using conventional concreting methods and equipment.

## 9.4 Maintenance and repair

For a specific installation, a maintenance regime must be considered to ensure that the required design life of the concrete is achieved.

# 10 **Manufacture**

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.



10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

## **11 Delivery and site handling**

11.1 The Certificate holder stated that the product is delivered to site in labelled 20 kg bags, boxes or pails that contain bulk powder or varying sizes of soluble bags for ease of addition. The label bears the company details, mixing instructions and a hazard label.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The product must be stored in sealed pails in a dry environment at a minimum temperature of 7°C.

11.2.2 When handling the product, the normal health and safety procedures associated with cementitious materials must be observed.

## †ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the Certificate.

### Construction (Design and Management) Regulations 2015

### Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

### CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

### UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the product in accordance with Designated Standard EN 934-2 : 2009 2012 Table 4.

### CE marking

The Certificate holder has taken the responsibility of CE marking the product, in accordance with harmonised European Standard EN 934-2 : 2009, Table 4.

### Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 by QMS International Limited (Certificate 39942021).

### Additional information on installation

A.1 Concrete containing the product is suitable for use in contact with potable water and has been approved by the Drinking Water Inspectorate for this purpose. The user must check the 'List of Approved Products for use in Public Water supply in the United Kingdom'.

A.2 Concrete containing the product is normally supplied as ready-mixed concrete but may also be prepared on sites check where there is adequate mix control<sup>(1)</sup>. Concrete prepared on site must be carried out in accordance with BS 8000-0 : 2014, the Certificate holder's instructions and this Certificate.

(1) NHBC will only accept use of the admixture where included at the concrete batching plant which must also be either QSRMC or BSI Kitemark registered.

A.3 The workability of the concrete can be adjusted using a suitable<sup>(1)</sup> water-reducing or superplasticising admixture complying with BS EN 934-2 : 2009, Tables 3.1 and 3.2, to ensure that the maximum water/cement ratio given in section 9.1.5 of this Certificate is not exceeded. The Certificate holder's advice must be sought regarding the suitability and compatibility of water-reducing or superplasticising admixtures but such advice and products are outside the scope of this Certificate.

A.4 Concrete containing the product is placed in the same way as normal concrete, in accordance with BS 8000-0 : 2014, BS EN 13670 : 2009, the Certificate holder's health and safety guidance and the normal routine precautions for handling concrete.

A.5 When water-based products are used to coat the hardened concrete, a bonding agent may be required. For specific cases, advice must be sought from the Certificate holder but such advice and products are outside the scope of this Certificate.

## Bibliography

- BS 1881-5 : 1970 *Testing concrete — Methods of testing hardened concrete for other than strength*
- BS 1881-121 : 1983 *Testing concrete — Method of determination of static modulus of elasticity in compression*
- BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*
- BS 5075-1 : 1982 *Concrete admixtures — Specification for accelerating admixtures, retarding admixtures and water-reducing admixtures*
- BS 8000-0 : 2014 *Workmanship on building sites — Introduction and general principles*
- BS 8102 : 2022 *Protection of below ground structures against water ingress — Code of practice*
- BS 8500-2 : 2015 + A2 : 2019 *Concrete — Complimentary British Standard to BS EN 206 — Specification for constituent materials and concrete*
- BS EN 197-1 : 2011 *Cement — Composition, specifications and conformity criteria for common cements*
- BS EN 206 : 2013 + A2 : 2021 *Concrete — Specification, performance, production and conformity*
- BS EN 480-1 : 2014 *Admixtures for concrete, mortar and grout — Test methods — Reference concrete and reference mortar for testing*
- BS EN 480-10 : 1997 *Admixtures for concrete, mortar and grout — Test methods — Determination of water soluble chloride content*
- BS EN 480-12 : 1998 *Admixtures for concrete, mortar and grout — Test methods — Determination of the alkali content of admixtures*
- BS EN 934-1 : 2008 *Admixtures for concrete, mortar and grout — Common requirements*
- BS EN 934-2 : 2009 + A1 : 2012 *Admixtures for concrete, mortar and grout — Concrete admixtures — Definitions, requirements, conformity, marking and labelling*
- BS EN 1992-1-1 : 2004 + A1 : 2014 *Eurocode 2 — Design of concrete structures — General rules and rules for buildings*
- NA + A2 : 14 to BS EN 1992-1-1 : 2004 + A1 : 2014 *UK National Annex to Eurocode 2 — Design of concrete structures — General rules and rules for buildings*
- BS EN 1992-1-2 : 2004 + A1 : 2019 *Eurocode 2 — Design of concrete structures — General rules — Structural fire design*
- NA to BS EN 1992-1-2 : 2004 *UK National Annex to Eurocode 2 — Design of concrete structures — General rules — Structural fire design*
- BS EN 1992-3 : 2006 *Eurocode 2 — Design of concrete structures — Liquid retaining and containing structures*
- NA to BS EN 1992-3 : 2006 *UK National Annex to Eurocode 2 — Design of concrete structures — Liquid retaining and containing structures*
- BS EN 12350-2 : 2000 *Testing fresh concrete — Slump-test*
- BS EN 12350-6 : 2000 *Testing fresh concrete — Density*
- BS EN 12350-7 : 2000 *Testing fresh concrete — Air content - pressure methods*
- BS EN 12390-3 : 2002 *Testing hardened concrete — Compressive strength of test specimens*
- BS EN 12390-5 : 2002 *Testing hardened concrete — Flexural strength of test specimens*
- BS EN 12390-8 : 2000 *Testing hardened concrete — Depth of penetration of water under pressure*
- BS EN 13670 : 2009 *Execution of concrete structures*
- PD CEN/TS 12390-9 : 2016 *Testing hardened concrete — Freeze-thaw resistance with de-icing salts — Scaling*
- EN 480-4 : 1997 *Admixtures for concrete, mortar and grout — Test methods — Determination of bleeding of concrete*
- EN ISO 9001 : 2015 *Quality management systems — Requirements*

### Conditions

#### 1 This Certificate:

- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.