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Agrément Certificate

20/5754

Product Sheet 1 Issue 2

MAPEI ADMIXTURES

MAPEI IDROCRETE SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Mapei Idocrete System, comprising a crystalline waterproofing admixture powder and a high range water-reducing (HRWR)/superplasticising admixture, used to provide watertight concrete suitable for basements, roofs, 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 system described herein. This system 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: 8 November 2023

Originally certified on 11 May 2020

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 the Mapei Idrocrete System is not subject to the national Building Regulations.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, the Mapei Idrocrete System, 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 system 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).

Fulfilment of Requirements

The BBA has judged the Mapei Idrocrete System to be satisfactory for use as described in this Certificate. The system has been assessed as a crystalline waterproofing admixture powder and a high range water-reducing (HRWR)/superplasticising admixture used to provide watertight concrete suitable for basements, roofs, swimming pools, tunnels and culverts.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. The Mapei Idrocrete System consists of:

- Idrocrete KR1000 — a crystalline waterproofing admixture powder
- Dynamon — a range of liquid admixtures designed as high range water reducers or superplasticisers complying with BS EN 934-2 : 2009, Tables 3.1 and 3.2.

Applications

The Mapei Idrocrete System is satisfactory for use in concrete mixes at an addition rate shown in Table 1, to provide watertight concrete for basements, roofs, swimming pools, tunnels and culverts.

Table 1 Mix designs

Component	Control concrete	Concrete containing the Mapei Idrocrete System
Water/cement ratio	0.43	0.45
Idrocrete KR1000 (% wt/wt Portland cement)	—	2
Dynamon Xtend W300N (l/100 kg Portland Cement) ⁽¹⁾	—	0.754

(1) The Dynamon dosage may be varied with the Certificate holder's agreement to obtain the appropriate slump and workability and ensuring the maximum water/cement ratio given in section 9.1.3 is not exceeded.

Product assessment – key factors

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

1 Mechanical resistance and stability

Data were assessed for the following characteristic.

1.1 Mechanical properties

1.1.1 Results of mechanical properties tests are given in Table 2.

Table 2 Results of mechanical properties tests

Product assessed	Assessment method	Requirement	Result
Concrete with the Mapei Idrocrete System ⁽¹⁾	Compressive strength to BS EN 12390-3 : 2009 7 days		
	Control	Value achieved	46.2 MPa
	System	Value achieved	48.3 MPa
Concrete with the Mapei Idrocrete System ⁽¹⁾	Compressive strength to BS EN 12390-3 : 2009 28 days		
	Control	Value achieved	57.5 MPa
	System	Value achieved	56.8 MPa
Concrete with the Mapei Idrocrete System ⁽¹⁾	Flexural strength to BS EN 12390-5 : 2009 7 days		
	Control	Value achieved	4.7 MPa
	System	Value achieved	5.0 MPa
Concrete with the Mapei Idrocrete System ⁽¹⁾	Flexural strength to BS EN 12390-5 : 2009 28 days		
	Control	Value achieved	5.1 MPa
	System	Value achieved	5.5 MPa
Concrete with the Mapei Idrocrete System ⁽¹⁾	Static modulus (28 days) to BS 1881-121 : 1983		
	Control	Value achieved	39750 MPa
	System	Value achieved	38850 MPa

(1) Concrete with 2% by weight of the total cementitious content addition of Idrocrete KR1000 and 0.754 l per 100 kg of cementitious content addition of Dynamon Xtend W300N.

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

1.1.3 On the basis of data assessed, the compressive strength, flexural strength and static modulus of elasticity of concrete containing the system are similar to that of an equivalent plain concrete.

1.1.4 Results of setting characteristics and hardening tests of concrete designed to BS EN 480-1 : 2014 are given in Table 3 of this Certificate.

Table 3 Results of setting characteristics and hardening tests

Product assessed	Assessment method	Requirement	Result
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Slump to BS EN 12350-2 : 2009		
	Control System	Value achieved	S2
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Plastic density to BS EN 12350-6 : 2009	Value achieved	2404 kg·m ⁻³
		Value achieved	2403 kg·m ⁻³
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Air content in fresh content to BS EN 12350-7 : 2009	≤ 2.0% above control concrete	Pass
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Effect of setting of concrete to BS 5075-1 : 1982	Value achieved retarding to control concrete	+160 mins
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Drying shrinkage to BS 1881-5 : 1970	Value achieved	0.038%
		Value achieved	0.028%
Concrete containing the Mapei Idrocrete System ⁽¹⁾	Wetting expansion to BS 1881-5 : 1970	Value achieved	0.016%
		Value achieved	0.005%

(1) Concrete with 2% by weight of the total cementitious content addition of Idrocrete KR1000 and 0.754 l per 100 kg of cementitious content addition of Dynamon Xtend W300N.

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

1.1.6 On the basis of data assessed, the setting time of concrete containing the system will be significantly retarded when compared with an equivalent plain concrete. The amount of retardation will depend on the concrete mix design used and the ambient temperature during placing and curing.

1.1.7 On the basis of data assessed, the drying shrinkage and wetting expansion of concrete containing the system is reduced compared with that of the equivalent plain concrete.

2 Safety in case of fire

Not applicable.

3 Hygiene, health and the environment

Data were assessed for the following characteristic.

3.1 Water penetration and water vapour permeability

3.1.1 Results of water penetration and water vapour permeability tests are given in Table 4.

Table 4 Results of water penetration and water vapour permeability tests

Product assessed	Assessment method	Requirement	Result
Concrete with Mapei Idrocrete System ⁽¹⁾	Capillary absorption to BS EN 480-5 : 2005 7 days 90 days	≤ 50% by mass of control mix	Pass
		≤ 60% by mass of control mix	Pass
Concrete with Mapei Idrocrete System ⁽¹⁾	Water vapour resistivity to BS 3177 : 1959 (25°C and 75% RH) Control System	Value achieved	1791 MN·s·g ⁻¹ ·m ⁻¹
		Value achieved	2028 MN·s·g ⁻¹ ·m ⁻¹
Concrete with Mapei Idrocrete System ⁽¹⁾	Water permeability to Valenta calculation method Control System	Value achieved	2.29 x 10 ⁻¹² m·s ⁻¹
		Value achieved	6.18 x 10 ⁻¹³ m·s ⁻¹

(1) Concrete with 2% by weight of the total cementitious content addition of Idrocrete KR1000 and 0.754 l per 100 kg of cementitious content addition of Dynamon Xtend W300N.

3.1.2 The specific effect of the system 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 system has greater resistance to water penetration and water absorption, and a higher resistance to water vapour diffusion, 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 MN·s·g⁻¹ or 500 MN·s·g⁻¹ is given by:

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

where:

t = concrete thickness (m)

μ = water vapour resistance factor.

3.1.5 Concrete containing the system has greater resistance to carbon dioxide diffusion than the equivalent plain concrete.

4 Safety and accessibility in use

Data were assessed for the following characteristic.

4.1 Reinforcement protection

4.1.1 Results of reinforcement protection tests are given in Table 5.

Table 5 Results of reinforcement protection tests⁽¹⁾

Product assessed	Assessment method	Requirement	Result
Idrocrete KR1000	Water soluble chloride content to BS EN 480-10 : 2009	≤ 0.1% by mass	Pass
Concrete with the Mapei Idrocrete System ⁽¹⁾	Bond to steel to a BBA Internal Method	Comparable adhesion to control	Pass

(1) Concrete with 2% by weight of the total cementitious content addition of Idrocrete KR1000 and 0.754 l per 100 kg of cementitious content addition of Dynamon Xtend W300N.

4.1.2 The specific effect of the system 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 system as < 0.1%.

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

4.1.5 On the basis of data assessed, the high level of alkalinity required to prevent corrosion of the reinforcement (pH > 13) will not be adversely affected by the incorporation of the system 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. The reduced permeability of concrete containing the system 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 system were assessed.

8.2 Specific test data were assessed for the following as given in Table 6.

Product assessed	Assessment method	Requirement	Result
Idrocrete KR1000	Alkali content (Na ₂ O equivalent) to	≤ 15%	Pass
Dynamon Xtend W300N	BS EN 480-12 : 2005	≤ 3.5%	Pass
Concrete with the Mapei Idrocrete System ⁽¹⁾	Resistance to freeze thaw to prCEN/TS 12390-9 : 2005	No cracks or significant scaling compared to control	Pass
Concrete with the Mapei Idrocrete System ⁽¹⁾	Resistance to efflorescence to a BBA Internal Method	No efflorescence observed	Pass

8.2.1 The specific effect of the system 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 values of ≤ 15% of Idrocrete KR1000 and ≤ 3.5% of Dynamon Xtend W300N must be used when calculating the contribution of the system 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 On the basis of data assessed, the lower permeability of concrete containing the system will reduce the ingress of sulfates. However, 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 Concrete containing the system has similar resistance to freeze/thaw to that of the equivalent plain concrete.

8.2.5 Use of the system will reduce the leaching of lime from the hydrated cement in concrete.

8.3 Service life

8.3.1 Under normal service conditions, concrete containing the system 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 system, 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 system must be designed in accordance with BS EN 206 : 2013, BS 8500-1 : 2015 and BS 8500-2 : 2015, for use as all normal types, including precast, pre-stressed, post-tensioned, ready-mixed, reinforced, slip-formed, sprayed and pumped concretes. For additional information on required thickness of concrete, the advice of the Certificate holder should be sought, but such advice is outside the scope of this Certificate.

9.1.3 The concrete must have a minimum cement content of $350 \text{ kg}\cdot\text{m}^{-3}$ and be batched with a maximum water/cement ratio of 0.45 to achieve a minimum consistence of 120 mm in the S3 range. Further details of suitable mixes can be obtained from the Certificate holder, but such advice is outside the scope of this Certificate.

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

9.1.5 Structures built incorporating the system must be designed to the relevant clauses 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.

9.1.6 Concrete mixes containing the system are suitable for Type B constructions as defined in BS 8102 : 2022, and can satisfy the requirements for all grades defined in Table 2 of that Standard. For Grade 3 (where control of water vapour is required), it will be necessary to provide a mix with a sufficiently low vapour permeability in combination with an adequate section thickness (see section 3.1). The use of suitable ventilation, dehumidification or air conditioning, appropriate to the intended use, must also be considered.

9.1.7 Basements for dwellings must be designed in accordance with the guidance given in the *Guidance Document — Basements for dwellings*⁽¹⁾.

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

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

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 are provided in Annex A of this Certificate.

9.2.3 Concrete containing the system is normally supplied as ready-mixed concrete but may be prepared on sites where there is adequate mix control⁽¹⁾. Preparation of concrete 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.

9.2.4 The system components are added to the concrete at the dosages given in Table 1 by automatic dispensing equipment. Between 50 and 75% of the total water is added first, followed by Idocrete KR1000, and finally Dynamon Xtend W300N and the remaining amount of water. The system components must always be added separately and must never be mixed together prior to addition.

9.2.5 Once mixed, further materials must not be added to the fresh concrete.

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

9.2.7 Concrete containing the system must be 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.

9.2.8 Concrete containing the system must not be placed at temperatures of 5°C or below.

9.2.9 Concrete containing the system mix must be fully compacted.

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

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 should be sought on particular applications, but such advice is outside the scope of this Certificate.

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

9.3 Workmanship

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

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the product in use requires that it is suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 For a specific installation, the 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 system components are delivered to site in packaging bearing the Certificate holder's name, product name, batch number and Health and Safety information. Idrocrete KR1000 is supplied in 20 kg bags or in boxes of 4 x 4 kg water soluble bags. Dynamon Xtend W300N is supplied in 25 kg or 200 litre drums, 1000 litre intermediate bulk containers (IBC), and bulk tankers.

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 components must be stored in sealed original containers in a dry environment at temperatures between 5 and 25°C.

11.2.2 When handling, the normal Health and Safety procedures associated with cementitious materials must be observed.

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 Mapei Idrocrete system is not covered by Designated Standard under the Construction Products Regulation. However, the Certificate holder has taken the responsibility of UKCA marking both components of the system individually, in accordance with Designated Standard EN 934-2 : 2009.

CE marking

The Mapei Idrocrete system is not covered by a harmonised European Standard under the Construction Products Regulation. However, the Certificate holder has taken the responsibility of CE marking both components of the system individually, in accordance with harmonised European Standard EN 934-2 : 2009.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Certiquality (Certificate 250).

Additional information on installation

A.1 The workability of concrete can be adjusted using a suitable water reducing or superplasticising admixture complying with BS EN 934-2 : 2009, to ensure that the maximum water/cement ratio given in section 9.1.3 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 materials are outside of the scope of this Certificate. Admixtures must be evaluated before use and site trials should be carried out to establish the appropriate dose required.

A.2 When water-based products are used to coat the hardened concrete, a bonding agent may be required. For specific cases, advice should be sought from the Certificate holder but such advice and materials 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 construction site — Introduction and general principles*
- BS 8102 : 2022 *Protection of below ground structures against water ingress — Code of practice*
- BS 8500-1 : 2015 + A2 : 2019 *Concrete — Complementary British Standard to BS EN 206 — Method of specifying and guidance for the specifier*
- BS 8500-2 : 2015 + A2 : 2019 *Concrete — Complementary 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 480-5 : 2005 *Admixtures for concrete, mortar and grout — Test methods — Determination of capillary absorption*
- BS EN 480-10 : 2009 *Admixtures for concrete, mortar and grout — Test methods — Determination of water soluble chloride content*
- BS EN 480-12 : 2005 *Admixtures for concrete, mortar and grout — Test methods — Determination of 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 — 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 : 2009 *Testing fresh concrete — Slump-test*
- BS EN 12350-6 : 2009 *Testing fresh concrete — Density*
- BS EN 12350-7 : 2009 *Testing fresh concrete — Air content — Pressure methods*
- BS EN 12390-3 : 2009 *Testing hardened concrete — Compressive strength of test specimens*
- BS EN 12390-5 : 2009 *Testing hardened concrete — Flexural strength of test specimens*
- BS EN 13670 : 2009 *Execution of concrete structures*
- BS EN ISO 9001 : 2015 *Quality management systems — Requirements*
- prCEN/TS 12390-9 : 2005 *Testing hardened concrete — Freeze-thaw resistance with de-icing salts — Scaling*

Conditions of Certificate

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
- is valid only within the UK
- 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
- is subject to English Law.

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.

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