Delta Membrane Systems Ltd
Delta House
Merlin Way
North Weald, Epping
Essex CM16 6HR

Tel: 01992 523523
e-mail: info@deltamembranes.com
website: www.deltamembranes.com

Agrément Certificate
19/5619
Product Sheet 1 Issue 3

DELTA MEMBRANE CEMENTITIOUS WATERPROOFING

KÖSTER NB1-GREY SYSTEM

This Agrément Certificate Product Sheet(1) relates to the KÖSTER NB1-Grey System, a cementitious waterproofing compound for use in internal waterproofing of new or existing structures in above ground and basement constructions where subsequent substrate movement is not expected.

(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 Third issue: 24 June 2025
Originally certified on 31 January 2019

Hardy Giesler
Chief Executive Officer

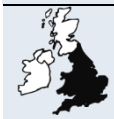
British Board of Agrément
1st Floor, Building 3, Hatters Lane
Croxley Park, Watford
Herts WD18 8YG
tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk

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

Having assessed the key factors, the opinion of the BBA is that the KÖSTER NB1-Grey System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**B4(2)**	**External fire spread**
Comment:		The system is unrestricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C2(a)**	**Resistance to moisture**
Comment:		The system can contribute to a structure satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The system can contribute to a structure satisfying this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	2.6	Spread to neighbouring buildings
Comment:		The system is unrestricted by this Standard, with reference to clause 2.6.4[(1)(2)]. See section 2 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		The system is unrestricted by this Standard, with reference to clause 2.7.1[(1)(2)]. See section 2 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The system will contribute to a structure satisfying this Standard, with reference to clauses 3.4.1[(1)(2)], 3.4.5[(1)(2)], 3.4.6[(1)(2)] and 3.4.7[(1)(2)]. See section 3 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The system will contribute to a structure satisfying this Standard, with reference to clause 3.10.1[(1)(2)]. See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting at least a bronze level of sustainability as defined in this Standard.

Regulation:	**12**	**Building standards – conversion**
Comment:		All comments given for the system under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1[(1)(2)] and Schedule 6[(1)(2)]. (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).

The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	**23(1)(a)(i) (ii)(iii)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**28(a)**	**Resistance to moisture and weather**
Comment:		The system will contribute to a structure satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The system will contribute to a structure satisfying this Regulation. See section 3 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The system is unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, the KÖSTER NB1-Grey 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*, Chapters 5.1 *Substructure and ground bearing floors* and 5.4 *Waterproofing of basements and other below ground structures*.

Where Grade 3 waterproofing 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 system must be used in combination with either a Type B or C waterproofing protection.

In the opinion of the BBA, the NHBC accepts the use of the system on existing structures when installed and used in accordance with this Certificate and *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the system.

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 the KÖSTER NB1-Grey System to be satisfactory for use as described in this Certificate. The system has been assessed as a cementitious waterproofing compound for use in internal waterproofing of new or existing structures in above ground and basement constructions where subsequent substrate movement is not expected.

ASSESSMENT

System description and intended use

The Certificate holder provided the following description for the system under assessment. The KÖSTER NB1-Grey System consists of:

- KÖSTER NB1-Grey — a cementitious based compound mixed with a blend of water based chemical additives to produce a slurry for positive and negative side hydrostatic pressure waterproofing applications
- KÖSTER Polysil TG 500 — a polymer and silicate solution used as a primer prior to the application of KÖSTER NB1-Grey
- KÖSTER Repair Mortar Plus — a slightly expanding mortar used for creating fillets at internal angles prior to the application of KÖSTER NB1-Grey
- KÖSTER SB Bonding Emulsion — a styrene-butadiene rubber (SBR) emulsion added to KÖSTER NB1-Grey and KÖSTER Repair Mortar Plus to improve workability and impart flexibility.

Ancillary Items

The Certificate holder recommends the following ancillary items for use with the system, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- restoration plaster
- proprietary joint sealants.

Applications

The KÖSTER NB1-Grey System will provide an effective barrier against the transmission of liquid water under hydrostatic pressure in above ground and basement construction.

The system is intended for use on the following sound substrates:

- brickwork
- stonework
- blockwork
- concrete
- cementitious plaster.

The system is a Type A tanking membrane as defined in BS 8102 : 2022, Clause 8.2.7, and is used in accordance with that Standard.

The system is satisfactory for use in the following situations:

- for interior waterproofing of concrete, brickwork, stone and blockwork structures
- for waterproofing concrete floors
- in newbuild tanking applications, applied to the internal surfaces of basements in combination with a Type B or C system as defined under BS 8102 : 2022
- for remedial tanking applied to the internal surfaces of existing basements.

System assessment – key factors

The system was assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Structural and mechanical properties

1.1.1 Results of strength and stability tests are given in Table 1.

Table 1 Strength and stability

System assessed	Assessment method	Requirement	Result
KÖSTER NB1-Grey System	Compressive strength to BS EN 12190 : 1999 Tested at 28 days	≥ 10 MPa (Class R1)	Pass
	Restrained shrinkage to BS 6319-12 : 1992	Value achieved	0.0 mm
KÖSTER NB1-Grey System on concrete	Bond strength to BS EN 1542 : 1999 Tested at 28 days Tested at 56 days	≥ 0.8 MPa	 Pass Pass

1.1.2 On the basis of data assessed, the system has satisfactory mechanical properties.

2 Safety in case of fire

Data were assessed for the following characteristic.

2.1 Reaction to fire

2.1.1 The Certificate holder has declared a reaction to fire classification to BS EN 13501-1 : 2018 as Class A1 for the system as defined by the national Building Regulations, as it contains less than 1% by mass of homogenously distributed organic materials.

2.1.2 The system is not subject to any restriction on building height or proximity to relevant boundaries.

2.1.3 Designers must refer to the relevant national Building Regulations and guidance for alternative approaches and detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers and combustibility limitations for other materials and components used in the over wall construction, for example, thermal insulation.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Properties in relation to water

3.1.1 Results of resistance to water and water vapour tests are given in Table 2.

Table 2 Resistance to water and water vapour

System assessed	Assessment method	Requirement	Result
KÖSTER NB1-Grey System	Water vapour permeability to BS EN ISO 7783 : 2011, Method B Water vapour diffusion resistance factor	Value achieved	109 µ
	Liquid water permeability to BS EN 1062-3 : 2008	Value achieved	
	Brush applied		W_2 medium
	Spray applied		W_2 medium
	Resistance to liquid water to a Vinci In-house test method Exposure to 10 bar water pressure after 15 days	No leakage	Pass
	Resistance to liquid water to a MFPA Leipzig GmbH In-house test method Exposure to 1.1 bar water pressure after 7 days	No leakage	Pass

3.1.2 On the basis of the data assessed, the system will adequately resist the passage of water under hydrostatic pressure and moisture from the ground and will enable a structure to comply with the requirements of the national Building Regulations.

3.1.3 For the purpose of assessing the risk of interstitial condensation, the water vapour resistance factor (µ) for the system is taken as 109.

3.2 Resistance to chemicals

3.2.1 The result of a resistance to chemicals test is given in Table 3.

Table 3 Chloride content

System assessed	Assessment method	Requirement	Result
KÖSTER NB1-Grey	Determination of water-soluble chloride content to EN 1015-17 : 2000	Value achieved	0.06%

3.2.2 On the basis of its composition, the system, may be used in class DS1 soils or groundwater as defined in BRE Special Digest 1 : 2005, see Table 4 of this Certificate.

Table 4 Concentration of sulfates

Design sulfate class for site	2:1 water/soil extract (SO_4 mg per litre)	Groundwater (SO_4 mg per litre)	Total potential (SO_4 %)
DS1	< 500	< 400	< 0.24

4 Safety and accessibility in use

Not applicable.

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.

8.1.2 Results of specific tests are given in Table 5.

Table 5 Durability results

System assessed	Assessment method	Requirement	Result
KÖSTER NB1-Grey System	Bond strength to BS EN 1542 : 1999 Control tested in parallel with freeze/thaw specimens	No significant loss of properties	Pass
KÖSTER NB1-Grey System Spray applied	Bond strength to BS EN 1542 : 1999 Exposure to thunder shower (thermal shock) and freeze/thaw exposing to de-icing salts to BS EN 13687-1 : 2002	No significant loss of properties	Pass
KÖSTER NB1-Grey System Brush applied	Bond strength to BS EN 1542 : 1999 Exposure to thunder shower (thermal shock) and freeze/thaw exposing to de-icing salts to BS EN 13687-1 : 2002	No significant loss of properties	Pass

8.2 Service life

Under normal service conditions, the system will have a life at least equivalent to the structure in which it is incorporated, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

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 against the requirements of BS 8000-4 : 1989, BS 8102 : 2022, CP 102 : 1973 Section 3, this Certificate and the Certificate holder's instructions, and the following requirements apply in order to satisfy the performance specified in this Certificate.

9.1.2 New buildings must be designed to withstand the hydrostatic pressure expected in service. The system must not be applied if subsequent movement of the substrate is anticipated.

9.1.3 The system is unable to accommodate substrate movement and can only be used where such movement is not anticipated, or in conjunction with waterproof movement joints. The Certificate holder can advise on suitable materials for such joints, but such advice and materials are outside the scope of this Certificate.

9.1.4 The coating is vulnerable to damage during installation and in service, particularly in heavily trafficked areas where there is a risk of impact or abrasion.

9.1.5 Floors must be protected with a suitable floor levelling compound or sand-cement screed.

9.1.6 The ground water chemistry may affect the performance of the system. Where acidic water conditions exist or other contamination is present the advice of the Certificate holder must be sought, but such advice 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 and the requirements of BS 8000-0 : 2014 and BS 8000-4 : 1989.

9.2.3 Installation of the system may be applied under most normal site conditions.

9.2.4 Application of the system must not be attempted at temperatures below 5°C. For advice on installation at temperatures above 30°C, the advice of the Certificate holder must be sought, but such advice is outside the scope of this Certificate.

9.2.5 For spray application, an addition of approximately 250 ml of water is made for each pack to reach a thin material suitable to be sprayed. Due to varying degrees of cement hydration and the latent-hydraulic active ingredients, KÖSTER NB1-Grey can cure in various shades and tones.

9.2.6 On highly absorbent substrates, the material may tend to prematurely dry. If premature drying is observed (early lightening of the surface), it must be sprayed with a bottle mister with water until the surface is dark and then protected from drying. The advice of the Certificate holder must be sought for protection options during installation.

9.2.7 The system must be mixed using a slow speed mixer. A 25 kg bag of KÖSTER NB1-Grey is added to either:

- 8 litres of water, or
- 6 litres of water plus 1 to 2 kg KÖSTER SB Bonding Emulsion.

9.2.8 Continuity must be maintained with any membrane (new or existing) in the basement floor using a flexible waterproof joint. The Certificate holder can advise on suitable detailing for a particular application, but this advice and products are outside the scope of this Certificate.

9.2.9 The substrate must be sound, solid and free of contamination such as grease or oil. All bond breaking substances such as old coats, laitance, loose particles, dust, formwork and release oil must be removed.

9.2.10 Old coatings must be removed by sandblasting or high-pressure water blasting (minimum 350 bar).

9.2.11 Substrates must be wetted or treated with KÖSTER Polysil TG 500 prior to application of the KÖSTER NB1-Grey compound.

9.2.12 Dusty or salt-damaged substrates must be brushed and primed with KÖSTER Polysil TG 500, 30 to 90 minutes prior to application of the KÖSTER NB1-Grey compound.

9.2.13 The system is applied in at least two coats with a brush or suitable spraying device. The coating must not be exposed to heat, frost or strong winds during the application and for at least 24 hours afterwards. The material must be brushed vertically and horizontally and worked into the substrate.

9.2.14 The system must be protected from drying before fully cured. For advice on curing times at temperatures above 30°C, the advice of the Certificate holder must be sought, but such advice is outside the scope of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the system must be carried out by a competent general builder, or a contractor, experienced with this type of system.

9.4 Maintenance and repair

As the system is protected by an overcoating layer or screed and has suitable durability, maintenance is not required.

10 Manufacture

10.1 The production processes for the system 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 system 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 KÖSTER NB1-Grey is delivered to site in 25 kg plastic sacks with packaging bearing the system name, the Certificate holder's name, batch number, health and safety information and user instructions/diagrams.

11.2 KÖSTER Polysil TG 500 is supplied in 1 kg plastic bottles and 10 kg plastic containers.

11.3 KÖSTER Repair Mortar Plus is supplied in 25 kg multiwall plastic bags.

11.4 KÖSTER SB Bonding Emulsion is supplied in 5 and 10 kg plastic containers.

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

11.5.1 KÖSTER NB1-Grey must be stored in a dry environment.

11.5.2 KÖSTER Polysil TG 500 must be stored under cool and frost-free conditions.

11.5.3 KÖSTER Repair Mortar Plus must be stored in a dry environment.

11.5.4 KÖSTER SB Bonding Emulsion must be stored under cool and frost-free conditions.

† ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the system 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 system components 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).

CE Marking

The Certificate holder has taken the responsibility of CE marking the system, in accordance with EAD 030092-00-0605.

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 DNV - GL (Certificate 257636-2018-AQ-GER-DAkks).

Bibliography

BRE Special Digest 1 : 2005 *Concrete in aggressive ground*

BS 6319-12 : 1992 *Testing of resin and polymer/cement compositions for use in construction – Methods for measurement of unrestrained linear shrinkage and coefficient of thermal expansion*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8102 : 2022 *Protection of below ground structures against water ingress — Code of practice*

BS EN 1062-3 : 2008 *Paints and varnishes — Coating materials and coating systems for exterior masonry and concrete — Determination of liquid water permeability*

BS EN 12190 : 1999 *Products and systems for the protection and repair of concrete structures — Determination of compressive strength of repair mortar*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*

BS EN 1542 : 1999 *Products and systems for the protection and repair of concrete structures – Test methods – Measurement of bond strength by pull-off*

BS EN 13687-1 : 2002 *Products and systems for the protection and repair of concrete structures — Test methods — Determination of thermal compatibility — Freeze-thaw cycling with de-icing salt immersion*

BS EN ISO 7783 : 2011 *Paints and varnishes – Determination of water-vapour transmission properties – Cup method*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

EAD 030092-00-0605, July 2018 *Mineral non-flexible sealing slurry kit on the basis of cement*

EN 1015-17 : 2000 *Methods of test for mortar for masonry — Determination of water-soluble chloride content of fresh mortars*

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.

British Board of Agrément
1st Floor, Building 3, Hatters Lane
Croxley Park, Watford
Herts WD18 8YG
tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk