

Waterproofing admixtures for concrete in below ground structures

(March 2020) (First Issue)



Question

What admixtures are acceptable to NHBC for inclusion in a Type B waterproof concrete system?

Consideration

This guidance considers the use of waterproofing admixtures in the concrete mix design to provide water-tight concrete structures. Such structures are intended to prevent the passage of water from the ground entering the building in accordance with NHBC Standards Chapter 5.4. They must also be designed in accordance with the relevant British or European Standards. If inclusion of a waterproofing admixture is being considered in a waterproofing context, then its' suitability must be demonstrated by the Engineer and/or the waterproofing design specialist with due consideration given to the design standards used and the commentary of the third party assessment along with the waterproofing admixture Producer/Supplier's requirements. Also, refer to NHBC Standards Clause 5.4.7.

Answer

There are a number of manufacturers producing waterproofing admixtures that are acceptable to NHBC and have third party certification. Details of the manufacturers and waterproofing admixtures that are currently acceptable to NHBC are as follows:-

- Admixture system
 - Producer and/or Supplier
 - BBA Certificate
- | | | | |
|---|--|---|--|
| 1 | Everdure Caltite aqueous, hydrophobic liquid and superplasticising liquid admixture
Cementaid (UK) Ltd (Producer and Supplier)
93/2888-PS1 | 5 | Grace Adprufe System; two component system comprising ADPRUFE 100 liquid and ADVA admixtures
Grace Construction Products Ltd (Producer and Supplier)
06/4319-PS1 |
| 2 | Pudlo CWP (Cement Waterproofing Powder) powder admixture
David Ball Group Ltd (Producer and Supplier)
01/3843-PS1 | 6 | Sika Watertight Concrete Powder admixture
Sika Limited (Producer and Supplier)
08/4606-PS1 |
| 3 | Xypex Admix C-1000 NF reactive crystalline admixture
Xypex (UK) LLP (Producer) and SMR Projects Ltd (Supplier)
05/4216-PS1 | 7 | Conplast WP402 Powder hydrophobic admixture
Fosroc Limited (Producer and Supplier)
08/4614-PS2 |
| 4 | Krystol Internal Membrane - HS (KIM-HS) powder admixture
Kryton International Inc (Producer) and ICCT Ltd (Supplier)
05/4217-PS1 | 8 | BASF Masterlife WP 799 Watertight Concrete Powder admixture
BASF plc (Producer and Supplier)
13/5029-PS1 |

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<p>9 Triton TT Super Admix admixture powder Triton Chemical Manufacturing Co Ltd (Producer and Supplier) 14/5129-PS1</p>	<p>11 Sika 1+ System Sika Limited (Producer and Supplier) 19/5643-PS1</p>
<p>10 Hydrocrete hydrophobic, pore-blocking, water-resisting admixture Seymour Global Limited trading as Premcrete (Producer and Supplier) 15/5225-PS1</p>	<p>12 12 Xypex Admix C-500 NF Xypex (UK) LLP (Producer and Supplier) 20/5718-PS1</p>
	<p>13 Sika WT-200p Sika Limited (Producer and supplier) 20/5722-PS1</p>

The above systems are acceptable to NHBC subject to the third party certification being current and maintained, and the user is responsible for checking their status. Check with Standards, Innovation and Research for other acceptable systems.

Surveillance

Where waterproofing admixtures for concrete are used in forming a Type B structure to comply with BS 8102 and NHBC Standards, NHBC will require additional surveillance over and above that required under the respective third-party certification.

A waterproofing admixture for concrete should be used as follows: -

- 1 The waterproofing design specialist or registered builder should inform NHBC, in advance of construction commencing, of any project where an admixture is proposed and the project is registered with NHBC. [Note: This is in order that NHBC Technical Operations may assess the specific proposals. In the first instance communications should be addressed to the NHBC Project Manager, Surveyor or Engineer, confirming the site details and NHBC registered parties concerned (Builder and/or Developer).
- 2 The waterproofing design specialist or registered builder should provide NHBC with details of construction and usage, together with the details of the professional teams involved with the project.
- 3 The registered builder or their representative, in conjunction with the waterproofing design specialist, should assess the proposed design and detail, including a detailed site investigation, to confirm suitability of the proposals for the project.
- 4 The registered builder or their representative should monitor both the production of the concrete at the batching plant (which must be either QSRMC or BSI Kitemark registered), as well as the waterproofing details and placement of the concrete on site. This is required to confirm to NHBC that full compliance with the waterproofing design specialist's design and/or the admixture supplier/producer's requirements have been achieved.
- 5 The registered builder or their representative should confirm to NHBC in writing, when the final inspection of the work has been satisfactorily carried out.
- 6 The registered builder or their representative should provide NHBC with compliance monitoring data when requested.
- 7 The registered builder or their representative should maintain and adhere to the requirements of third-party assessment for the waterproofing products used.