

## Everbuild Building Products Ltd

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Agrément Certificate  
**15/5197**  
Product Sheet 1

### EVERBUILD WATERPROOFING SYSTEMS

### EVERBUILD FEBTANK SUPER

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Everbuild Febtank Super, a durable waterproofing coating, used to produce waterproof renders and screeds for basements, cellars, pools, reservoirs and below-ground applications.

(1) Hereinafter referred to as 'Certificate'.

#### CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

#### KEY FACTORS ASSESSED

**Resistance to water and water vapour** — when applied to a concrete substrate, the systems will resist the passage of moisture into the structure (see sections 6 and 7).

**Resistance to sulfates** — the systems may be used in class DS1 soils and groundwater as defined in BRE Special Digest 1 : 2005 *Concrete in aggressive ground* (see section 10).

**Durability** — under normal conditions of use, the systems will provide an effective barrier to the transmission of liquid water for the life of the building to which they are applied (see section 14).



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 First issue: 30 April 2015

John Albon — Head of Approvals  
Construction Products

Claire Curtis-Thomas  
Chief Executive

*The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at [www.bbacerts.co.uk](http://www.bbacerts.co.uk)*

*Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.*

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# Regulations

In the opinion of the BBA, Everbuild Febtank Super, 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 presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

Requirement:	C2(a)(b)	Resistance to moisture
Comment:		The product satisfies this Requirement. See sections 6 and 7 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The product is acceptable. See section 14 and the <i>Installation</i> part of this Certificate.



## The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The product can contribute to a construction satisfying this Regulation. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.3	Flooding and ground water
Standard:	3.4	Moisture from the ground
Standard:	3.10	Precipitation
Comment:		The product provides an effective barrier to liquid water and water vapour, with reference to clauses 3.3.1 <sup>(1)(2)</sup> , 3.4.1 <sup>(1)(2)</sup> , 3.4.2 <sup>(1)(2)</sup> , 3.4.5 <sup>(1)(2)</sup> , 3.4.6 <sup>(1)(2)</sup> , 3.4.7 <sup>(1)(2)</sup> , 3.4.10 <sup>(1)(2)</sup> and 3.10.1 <sup>(1)(2)</sup> . See sections 6 and 7 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given for this product under Regulation 9, Standards 1 to 6, also apply to this Regulation with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



## The Building Regulations (Northern Ireland) 2012

Regulation:	23	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		The product satisfies the requirements of this Regulation. See sections 6 and 7 of this Certificate.

## Construction (Design and Management) Regulations 2015

## Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* of this Certificate.

# Additional Information

## NHBC Standards 2014

NHBC accepts the use of Everbuild Febtank Super, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Section 5.1 *Substructure and ground bearing floors* and as a remedial measure in relation to *NHBC Standards for Conversions and Renovations*, on a project specific basis, taking account of the relevant factors.

# Technical Specification

## 1 Description

1.1 Everbuild Febtank Super is a one-component, polymer-modified, cement-based protective and waterproofing slurry coating, used to produce multi-coat waterproofing renders and coatings as described in Clause 8.2.7 of BS 8102 : 2009, and waterproof screeds.

1.2 The product has an aggregate/cement ratio of 1.76 and a mixed wet density of 1880 to 2080 kg·m<sup>-3</sup>. It is available in grey and white, and may be covered with a decorative finish or left uncovered.

## 2 Manufacture

2.1 The product is a mixture of Portland cement, aggregate, polymers and additives, and is manufactured by a batch-blending process.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control being operated by the manufacturer are being maintained.

2.3 The management system of Everbuild Building Products Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by BSI (Certificate FM 563743).

## 3 Delivery and site handling

3.1 The product is supplied in 20 kg plastic buckets and 25 kg bags.

3.2 The product must be stored in dry, frost-free conditions under cover, clear of the ground and stacked not more than 6 bags high. The shelf-life of the product, when stored unopened in temperatures between 5°C and 25°C, is at least six months.

3.3 The product is classified as 'irritant' under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009* (CHIP4)/*Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009*.

3.4 The normal health and safety procedures associated with cementitious materials should be observed, during transportation, storage and on site.

# Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Everbuild Febtank Super.

## Design Considerations

## 4 Use

4.1 Everbuild Febtank Super is satisfactory for use as interior or exterior waterproofing of concrete, brickwork and blockwork structures, and as a waterproofing system for tanks and pools. It resists both negative and positive water pressure, providing an effective barrier against the transmission of liquid water, and gives basements a level of protection suitable for grades 1 to 3 (see Table 1).

Table 1 Grade of waterproofing protection (as defined in BS 8102 : 2009, Table 2)

Grade	Example of use of structure
1	Car parking; plant rooms (excluding electrical equipment); workshops
2	Workshops and plant rooms requiring drier environment; retail storage areas
3	Ventilated residential and working areas including offices, restaurants etc

4.2 New buildings must be designed to withstand the hydrostatic pressure expected in service. The product should not be applied until structural movement owing to curing is complete.

4.3 Everbuild Febtank Super is not a decorative treatment (although it can be overcoated<sup>(1)</sup>) and may display signs of 'blooming' after rain or in damp conditions.

(1) Contact the Certificate holder for further advice.

## 5 Practicability of installation

The product is designed to be installed by suitably-competent and experienced contractors, in accordance with the Certificate holder's instructions.

## 6 Weathertightness



Everbuild Febtank Super provides an effective barrier to the transmission of liquid water.

## 7 Water vapour resistance



The product has a water vapour resistance of  $3.2 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$ .

## 8 Resistance to movement

The product is slightly flexible and can be used to bridge hairline cracks, but cannot accommodate substrate movement of designed expansion joints. The Certificate holder can advise on such details.

## 9 Resistance to damage

The product is vulnerable to damage during installation and in service, particularly when left unprotected in heavily-trafficked areas where there is a risk of impact or abrasion.

## 10 Resistance to sulfate

Everbuild Febtank Super may only be used in soils of Class DS1 as defined in BRE Special Digest 1 : 2005 *Concrete in aggressive ground*, Table C1 (see Table 2).

Class	In soil		In ground water (g per litre)
	Total $\text{SO}_4$ (%)	$\text{SO}_4$ in 2:1 soil extract (g per litre)	
DS1	<0.24	<0.5	<0.4

## 11 Condensation risk

11.1 When the product is applied to the inside of a basement wall, the wall structure behind the waterproofing may remain wet, with subsequent risk of condensation and frost damage in cold conditions.

11.2 The condensation risk can be minimised by the application of a coat of proprietary lightweight cement-based renovating plaster and the provision of adequate heating and ventilation. Dehumidifiers must not be used during the curing period.

## 12 Fixings

12.1 To avoid breaching the waterproofing when attaching fixings, one of the following should be used:

- epoxy resin or polyurethane adhesive to bond lightweight fixings to the surface (the Certificate holder should be consulted for advice on suitable materials)
- recesses made in the substrate and lined with the render to form waterproof pockets to accept heavy duty fittings. The pockets are packed with mortar to hold the fixings in position
- floor-standing supports.

12.2 If these techniques cannot be applied and it is necessary to breach the waterproof coating, recesses formed in the substrate must be packed with the waterproof system.

## 13 Maintenance and repair

Under normal circumstances maintenance and repair will not be necessary. However, if damage or cracking occurs, repairs may be achieved using an appropriate method as described in clause 11 of BS 8102 : 2009. In such circumstances, the advice of the Certificate holder should be sought.

## 14 Durability



Under normal conditions of use, the systems will provide an effective barrier to the transmission of liquid water for the life of the building to which they are applied.

## 15 General

15.1 Installation of Everbuild Febtank should be carried out by the Certificate holder's recommended contractors, in accordance with the manufacturer's instructions. Workmanship should comply with BS 8000-0 : 2014, BS 8000-3 : 2011 and BS 8000-4 : 1989.

15.2 The product may be installed under most normal site conditions but external application should not be attempted to frozen substrates, during rain, nor at temperatures below 5°C. Avoid application in direct sunlight and always apply the product to a pre-dampened surface.

## 16 Surface preparation

16.1 Before application, all surfaces must be clean, sound and free from previous coatings and surface water.

16.2 Before application as an external waterproofing treatment for brickwork or blockwork masonry, the surface must be wire-brushed, all defective mortar joints raked out squarely 10 mm to 12 mm deep, and the surface washed thoroughly.

16.3 All joints and surface defects should be made good using Feb Waterplug.

16.4 Before application as internal tanking, the surface is bush-hammered, all mortar joints are raked out, and the surface is washed thoroughly.

16.5 When casting new concrete, a suitable surface for the application of the product can be obtained using shutters treated with a surface retarder<sup>(1)</sup>. When the shutters are removed, the surface is wire-brushed and washed thoroughly. Other new concrete surfaces are prepared by bush-hammering or grit/water blasting.

(1) The Certificate holder should be consulted for advice on suitable materials.

16.6 For floors, all existing coverings must be removed and all surface prepared by blasting, followed by washing to remove debris.

16.7 Any defects are made good, and water infiltration through the surface to be treated is either diverted by drainage or concentrated at points to be plugged<sup>(1)</sup>.

(1) The Certificate holder should be consulted for advice on suitable materials.

16.8 Immediately prior to application, the substrate should be soaked with clean water to aid adhesion; however, free surface water must not be present.

## 17 Procedure

17.1 The powder is mixed with water by hand or using a slow-speed drill/paddle (speed 400–600 rpm) in a plastic or steel bucket, until the mix is free from lumps. The volume of water needed to mix the 25 kg pack<sup>(1)</sup> is dependent on the method of application. Quantities are given in Table 3. The amount of water used must be no more than 5.4 litres.

(1) Half the amount of water is required for the 12.5 kg pack size.

*Table 3 Febtank Super 1:10 solution quantities*

Application method	Quantity of water (litres)
Brush	4.5 to 4.7
Trowel	4.0 to 4.25
Spray	4.0 to 4.5

17.2 The resultant mortar mix should be applied within its workable life (approximately 30 minutes at 20°C).

17.3 The product should be applied in a minimum of two layers to give a total thickness of between 2 mm and 5 mm using one of the following methods:

- brush — the product should be applied in even layers using a stiff brush on vertical surfaces and a rubber squeegee or brush for horizontal surfaces. The first coat is allowed to stiffen (normally after two to six hours) and a second coat applied within 24 hours at the same coverage rate. Apply a second coat at right angles to the first, to ensure good coverage
- trowel — the first layer may be applied using a trowel with 3 mm to 4 mm teeth. Once the first coat has hardened, a smooth-edged trowel may be used to apply the second coat
- spray — both coats are applied using wet spray equipment, ensuring the first coat has hardened sufficiently to prevent damage from the second spray application. The second coat may be smoothed using brush or trowel.

17.4 Whilst curing, the product should be protected from direct sunlight and strong winds, using damp hessian or polythene sheeting.

## Detailing

17.5 In all cases, joints or live cracks should be sealed and reflected through the waterproofing system with a flexible sealant suitable for the particular application.

17.6 Penetrations by such features as pipes must be securely sealed to maintain watertightness. The advice of the Certificate holder should be sought on suitable systems.

## Technical Investigations

### 18 Tests

18.1 An evaluation was made of the Certificate holder's test data for the product, including:

- flow
- density
- air content
- compressive strength
- drying shrinkage
- modulus of elasticity
- pull-off strength (adhesion).

18.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

18.3 The methods of application and durability of the product was assessed.

18.4 Visits were made to sites to assess the practicability of installation.

18.5 User surveys of treated properties were conducted.

18.6 An evaluation was made of the effect of the products on the potability of water.

## Bibliography

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*

BS 8000-3 : 2001 *Workmanship on building sites — Code of practice for masonry*

BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 6920-1 : 2000 *Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water — Specification*

BS 8102 : 2009 *Code of practice for protection of below ground structures against water from the ground*

BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

## 19 Conditions

19.1 This Certificate:

- relates only to the product/system 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.

19.2 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.

19.3 This Certificate will remain valid for an unlimited period provided that the product/system 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.

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

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

19.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system 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.