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Agrément Certificate
89/2278
Product Sheet 1

RIW LIQUID-APPLIED WATERPROOFING SYSTEMS

RIW LIQUID ASPHALTIC COMPOSITION

This Agrément Certificate Product Sheet⁽¹⁾ relates to RIW Liquid Asphaltic Composition, a sandwich membrane for use as a waterproofing layer in above- and below-ground structures of concrete, brickwork, blockwork or masonry, or to form a damp-proof membrane for solid floors.

(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

Weathertightness — the product will resist the passage of moisture into the structure (see section 6).

Resistance to mechanical damage — the product will accept the limited foot traffic and loads associated with installation and maintenance of the system and the effects of thermal or other minor movement likely to occur in service (see section 7).

Durability — under normal service conditions, the product will provide an effective barrier to the transmission of moisture for the life of the structure in which it is incorporated (see section 9).

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

Simon Wroe
Head of Approvals — Materials

Claire Curtis-Thomas
Chief Executive

Date of First issue: 17 March 2014

Originally certified on 22 August 1989

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

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, RIW Liquid Asphaltic Composition, if installed, used and maintained in accordance with this Certificate, will meet or contribute to meeting 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)	Resistance to moisture
Comment:	The product will enable a structure to meet this Requirement. See section 6 of this Certificate.
Regulation: 7	Materials and workmanship
Comment:	The product is acceptable. See section 9.1 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 satisfies the requirements this Regulation. See section 9.1 and the <i>Installation</i> part of this Certificate.
Regulation: 9	Building standards applicable to construction
Standard: 3.4	Moisture from the ground
Comment:	The product will enable a structure to satisfy the requirements of this Standard, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ , 3.4.2 ⁽¹⁾⁽²⁾ and 3.4.5 ⁽¹⁾⁽²⁾ to 3.4.7 ⁽¹⁾⁽²⁾ . See section 6 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:	Comments made in relation to the product 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

Regulation: 23(a)(b)(i)	Fitness of materials and workmanship
Comment:	The product is acceptable. See section 9.1 and the <i>Installation</i> part of this Certificate.
Regulation: 28(a)	Resistance to moisture and weather
Comment:	The product will enable a structure to satisfy the requirements of this Regulation. See section 6 of this Certificate.

Construction (Design and Management) Regulations 2007

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

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

See sections: 3 *Delivery and site handling* and 11 *Precautions* of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of the RIW Liquid Asphaltic Composition, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 5.1 *Substructure and ground bearing floors*, clauses M8 *Damp-proof membrane* (for use below the slab and in sandwich constructions) and M10 *Tanking materials* (for use as part of an external basement tanking system).

Technical Specification

1 Description

1.1 RIW Liquid Asphaltic Composition is a solution of natural and petroleum bitumens in white spirit to form a waterproof layer.

1.2 Ancillary items necessary for installation of the product include:

- RIW Sheetseal 226 — a flexible sheet membrane, used over the RIW Liquid Asphaltic Composition, for reinforcing areas subject to movement.

1.3 Other items which may be used with the product, but which are outside the scope of this Certificate, include:

- RIW Cementfill FC — cement-based waterproof fairing coat and repair mortar for filling minor holes, voids and defects
- RIW Cementfill HB — cement-based waterproof high-build repair mortar for profiling and providing fillets
- RIW Double Drain — a drainage board for protecting the membrane during backfilling operations, and also promoting drainage of water away from the structure
- RIW Protection Board — a 3 mm thick bitumen-impregnated board to prevent damage to the waterproof membrane during backfilling operations
- RIW Adhesive Tape — a 150 mm wide double-sided tape for temporarily adhering RIW Protection Board or Double Drain to RIW Liquid Asphaltic Composition
- RIW Sheetseal 9000 DPC — a range of high-performance polymeric damp-proof courses and pre-formed cavity trays.

2 Manufacture

2.1 The product 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 operated by the manufacturer are being maintained.

3 Delivery and site handling

3.1 The product is delivered to site in 5 litre and 25 litre drums. Each container bears the product name, manufacturer's name and the BBA logo bearing the number of this Certificate. Unopened containers have a minimum shelf-life of 12 months.

3.2 The product is classified under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (CHIP4)/Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009* as 'flammable' with a flashpoint of 38°C. Containers bear the appropriate hazard warnings.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on RIW Liquid Asphaltic Composition.

Design Considerations

4 General

4.1 RIW Liquid Asphaltic Composition forms a sandwich membrane which is satisfactory for use as a waterproofing layer in above- and below-ground structures of concrete, brickwork, blockwork or masonry, or to form a damp-proof membrane for solid floors.

4.2 The system is compatible with concrete, smooth brickwork, blockwork and screeded substrates, and is resistant to those chemicals likely to occur in normal service conditions.

5 Practicability of installation

The product is designed to be installed by a competent contractor experienced with this type of material.

6 Weathertightness



The product will adequately resist the passage of moisture from the ground into the structure and enable a structure to comply with the requirements of the national Building Regulations:

England and Wales — Approved Document C, Requirement C2(a), Section 4.7

Scotland — Mandatory Standard 3.4, clauses 3.4.1, 3.4.2 and 3.4.5 to 3.4.7

Northern Ireland — Regulation 28(a).

7 Resistance to mechanical damage

7.1 The bond between the product and substrate is satisfactory.

7.2 The product can accommodate limited hairline cracking in the substrate, but cannot bridge movement or construction joints between different substrates where movement is likely. In these situations, conventional treatment with sealants and waterstops must be used, and continuity must be maintained between the joint and membrane (the sealant manufacturer must be consulted on the sealant's compatibility and the need for primers).

7.3 The product can be damaged by sharp objects and care must therefore be taken, particularly when the membrane is exposed during construction and screeding operations.

7.4 Provided sufficient care is taken, the product will not be damaged by normal foot traffic. Additional protection from foot traffic can be given by using RIW Protection Board.

8 Maintenance

As the product is confined within the structure and has satisfactory durability, maintenance is not required. Any damage occurring during construction works must be repaired in accordance with section 13 *Repair* prior to the application of protection or backfilling.

9 Durability



9.1 RIW Liquid Asphaltic Composition, when subjected to normal service conditions, will provide an effective barrier to the transmission of moisture for the life of the structure in which it is incorporated.

9.2 The product is not affected by contact with an alkaline substrate.

Installation

10 General

10.1 Installation of RIW Liquid Asphaltic Composition must generally be in accordance with the relevant requirements of CP 102 : 1973, Section 2, or BS 8102 : 2009, and the Certificate holder's application instructions.

10.2 New concrete, screeds or renderings should have a trowelled, lightly-tamped or brushed finish, and be free from defects. Brickwork, blockwork or masonry should be flush-pointed or finished with a sand/cement render. Defects in existing surfaces should be made good. All surfaces must be clean, sound and surface-dry.

10.3 The product must not be applied to exposed surfaces in wet conditions (ie rain or standing water), at temperatures below 5°C, nor if these conditions are likely to occur before the membrane has dried.

11 Precautions

11.1 Vapours from the product may cause sensitisation and irritation to the respiratory system, eyes and skin. The product must only be used in areas with sufficient ventilation to prevent the build-up of vapours. Contact with the skin, eyes and clothes must be avoided. The Certificate holder's material safety data sheet must be consulted for detailed information on the safe handling and use of the product.

11.2 The product must not be allowed to enter the waste drainage system.

12 Procedure

12.1 The product must be applied by brush or roller in two coats to concrete floors and walls at, above or below ground level.

12.2 The first coat of the product is applied by brush or roller at a coverage rate of 1.7 m² per litre. When dry, a second coat is applied at a coverage rate of 2.5 m² per litre. The coats should not be sanded, and the membrane must be linked to any adjacent damp-proof course.

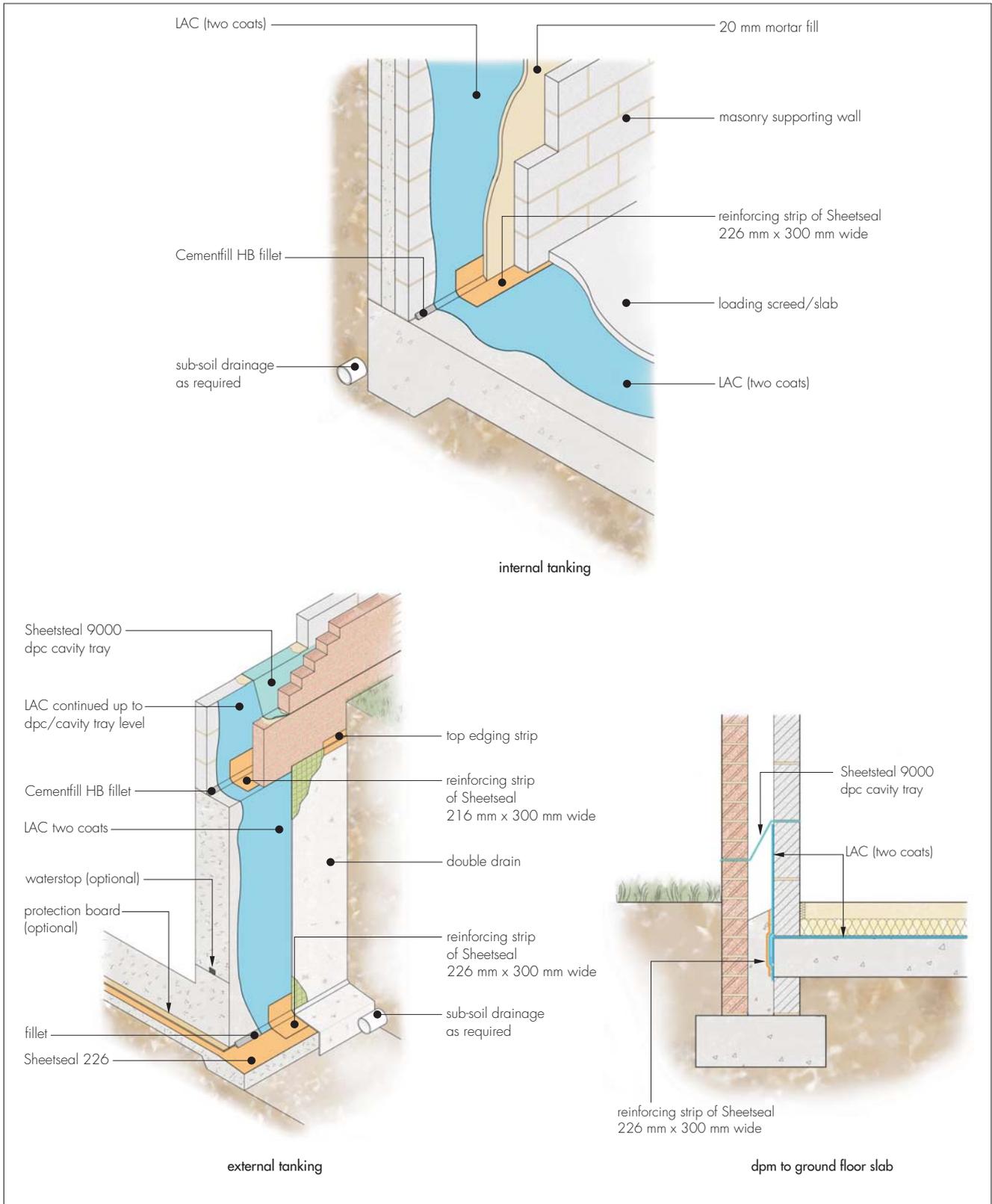
12.3 The product must be allowed to dry fully, throughout its thickness, before a second coat, or any mechanical protection, is applied. Under normal conditions of temperature and ventilation, this is possible after 24 hours.

12.4 The product must always be protected by a layer of concrete, un-bonded screed, or by brickwork or blockwork. Alternatively, where backfilling is to occur, the membrane can be protected by the use of a drainage composite or by a layer of rot-proof non-compressible board. Care must be taken to avoid damaging the membrane before and during these operations (see Figure 1).

12.5 When used as an internal tanking, the membrane is loaded against back pressure, for example by erecting a brick or blockwork skin 20 mm from the membrane, and filling the cavity with sand-cement mortar. The outside of the wall is not backfilled until after the membrane has cured (see Figure 1).

12.6 Where the structure is penetrated (eg by pipes or conduits), or movement capability is required at construction joints, or dissimilar materials meet at internal/external angles, RIW Sheetseal may be used to form a sleeve, link or additional reinforcement, respectively, at these points.

Figure 1 Installation details



13 Repair

If damage occurs, the product may be repaired by recoating the damaged area at the appropriate rate for the application prior to the installation of any protection.

Technical Investigations

14 Tests

Tests were conducted on RIW Liquid Asphaltic Composition and the results assessed to determine:

- water vapour permeability

- resistance to water pressure
- resistance to crazing
- resistance to screeding
- effect of hard body impact
- resistance to alkali
- effect of heat ageing
- effect of cold water soak (effect on adhesion).

15 Investigations

15.1 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.

15.2 A user survey was carried out to assess the performance of the product in use.

Bibliography

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

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

16 Conditions

16.1 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.

16.2 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.

16.3 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.

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

16.5 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.

16.6 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.