

Solco Building Products

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Agrément Certificate
14/5164
Product Sheet 1

SOLCO WATERPROOFING MEMBRANES

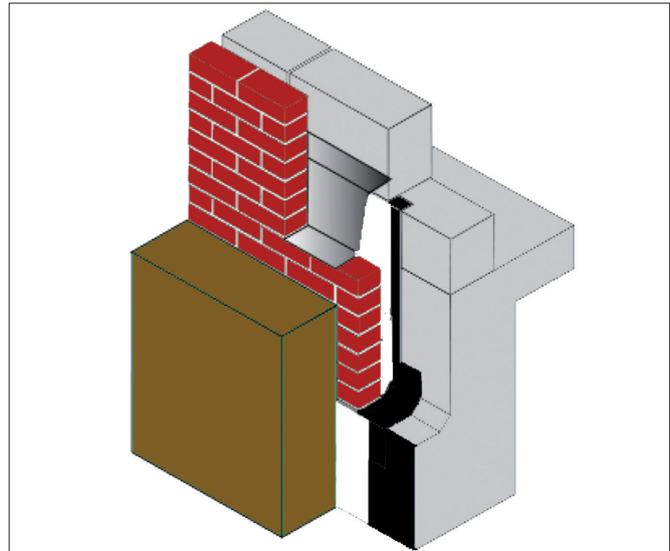
SOLSHEET SELF-ADHESIVE MEMBRANE

This Agrément Certificate Product Sheet⁽¹⁾ relates to Solsheet Self-Adhesive Membrane, a polyethylene/modified bitumen membrane for damp-proofing and waterproofing solid concrete floors and underground structures, and for internally and externally applied tanking below ground.

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

Adhesion — the adhesion of the product to the substrate and itself is satisfactory (see section 7).

Effects of temperature — the product remains flexible and can be formed at the minimum recommended temperatures (see section 8).

Resistance to mechanical damage — the product will accept without damage the limited foot traffic and loads associated with installation and the effects of thermal or other minor movement likely to occur in practice (see section 9).

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 has been incorporated (see section 11).

The BBA has awarded this Agrément 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

A handwritten signature in black ink, appearing to read 'Simon Wroe'.

Date of First issue: 20 October 2014

Simon Wroe
Head of Approvals — Materials

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

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

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, Solsheet Self-Adhesive Membrane, 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)	Resistance to moisture
Comment:		The product, including joints, will enable a structure to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The product is acceptable. See section 11 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 11 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, including joints, will enable a structure to satisfy the requirements of this Standard, with reference to clause 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 this 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)(i)(iii)(b)(i)	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		The product, including joints, 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: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.4) of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of Solsheet Self-Adhesive Membrane, 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).

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with EN 13969 : 2004. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

1 Description

1.1 Solsheet Self-Adhesive Membrane is a 1.5 mm thick, cross-laminated, polyethylene membrane coated on the lower surface with a layer of polymer-modified bitumen. The lower surface of the polymer-modified bitumen is protected by a layer of release film.

1.2 The nominal characteristics of the membrane are:

Thickness (mm)	1.5
Roll length (m)	20
Watertightness* (kPa)	60
Tensile strength* (N per 50 mm)	
longitudinal	270
transverse	270
Nail tear* (N)	
longitudinal	180
transverse	140
Low temperature flexibility* (°C)	≤-15.

1.3 The following ancillary items are available for use with the membrane:

- Solco QD Primer — a modified-bitumen solution used to prepare substrates prior to application of the membrane
- Solseal Bitumen Emulsion — a modified-bitumen emulsion used to prepare substrates prior to application of the membrane
- Solco Bitumen Trowel Mastic — a cold-applied flexible joint sealant.

1.4 Ancillary items for use with the membrane, but which are outside the scope of the Certificate, are:

- Solsheet XL Jointing Tape — a self-adhesive bitumen tape, used as reinforcing/over-banding tape for securing waterproofing and gas protection membranes at overlaps, edge and corner details
- Solco HD Bitumen Protection Board — a tough, reinforced flexible bitumen modified board, for the protection of adhesive waterproofing membrane and other types of waterproofing membranes against damage by abrasive backfill materials and poured concrete
- Solco Protection Fleece (SP30) — used as a protection and/or separation layer against mechanical or chemical damage, and between the waterproofing membrane and overlying components.

2 Manufacture

2.1 The membrane is manufactured by coating and laminating.

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 as part of a surveillance process to verify that specifications and quality control operated by the manufacturer are maintained.

3 Delivery and site handling

3.1 Rolls of the membrane are packed in paper or plastic wrappers bearing the manufacturing company's name, roll type, batch number and the BBA logo incorporating the number of this Certificate.

3.2 The rolls must be stored in dry conditions under cover, on their end. The temperature must be maintained at between 5°C and 30°C.

3.3 When stored in accordance with section 3.2, the shelf-life of the membrane will be 24 months.

3.4 Solco QD Primer 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 'harmful' and 'highly flammable', with a flashpoint of 30°C and is stored in accordance with *The Dangerous Substances and Explosive Atmospheres Regulations 2002*. Containers bear the appropriate hazard warnings.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Solsheet Self-Adhesive Membrane.

Design Considerations

4 Use

4.1 Solsheet Self-Adhesive Membrane is satisfactory for use in accordance with the relevant clauses of CP 102 : 1973, section 2 or BS 8102 : 2009 as a damp-proof and/or waterproof membrane provided it is fully supported and protected.

4.2 The membrane is compatible with concrete, smooth brickwork and blockwork or screeded substrates and is resistant to those chemicals likely to be present in normal service conditions.

5 Practicability of installation

Installation can be carried out readily by operatives experienced with this type of product.

6 Resistance to water and water vapour



Results of tests confirm that the membrane, and joints in the membrane, when completely sealed and consolidated, will adequately resist the passage of moisture from the ground and so meet the requirements of the national Building Regulations:

England and Wales — Approved Document C, Requirement C2(a), Section 3.3

Scotland — Regulation 9, Mandatory Standard 3.4

Northern Ireland — Regulation 28a.

7 Adhesion

Results of tests indicate that the adhesion of the membrane to the substrate and to itself, jointed as described in this Certificate, is satisfactory.

8 Effects of temperature

8.1 The membrane remains flexible and capable of being formed at the minimum recommended temperatures.

8.2 When protected immediately after installation, the membrane should not achieve temperatures at which slippage owing to softening of the adhesive layer can occur.

9 Resistance to mechanical damage

9.1 The properties of the membrane accommodate minor movements likely to occur under normal service conditions in the structure in which it is incorporated.

9.2 The membrane can be punctured by sharp objects and care should be taken in handling building materials and equipment over the exposed surface.

9.3 Provided there are no sharp objects present on the membrane surfaces prior to and during installation of the protective layer, the product will not be damaged by normal foot traffic. If damaged, repairs can be carried out by patching (see section 15).

10 Maintenance

As the product is confined and has suitable durability maintenance is not required. Any damage occurring during installation must be repaired in accordance with section 15, prior to backfilling.

11 Durability



The product, when fully protected and subjected to normal service conditions, will provide an effective barrier to the transmission of liquid water and water vapour for the life of the structure in which it is incorporated.

Technical Investigations

12 General

12.1 Solsheet Self-Adhesive Membrane must be installed in accordance with the relevant requirements of CP 102 : 1973, section 2 or BS 8102 : 2009 and the Certificate holder's instructions. Additional guidance on the use of dpm materials is available in BS 8000-4 : 1989.

12.2 All surfaces to which the membrane is to be applied should have a smooth finish, ie they should be free from cavities, projections and mortar deposits. Surfaces should be dry and free from dust and frost. Concrete surfaces should be dense. Surfaces should be primed with the appropriate primer, at the recommended coverage rate, and allowed to dry.

12.3 Vertical surfaces of brickwork and blockwork should be dry and, preferably, rendered to provide an even surface. Brickwork or blockwork not rendered must be flush pointed to give a smooth surface without sudden changes in level.

12.4 The membrane can be installed in all normal site conditions provided the air temperature is not below 5°C to prevent the risk of surface condensation.

12.5 The membrane should be covered by a screed or other protective layer as soon as possible after installation. If blockwork protection is used, care must be taken to avoid damage to the membrane during construction.

13 Procedure

13.1 The release film is removed prior to applying the membrane to the prepared substrate. In all cases, as the sheet is laid, the membrane must be pressed firmly from the middle to prevent trapping air.

13.2 Overlaps should be a minimum of 70 mm. The surface to be overlapped should be dust free and the membrane must be firmly pressed down to ensure a watertight bond.

13.3 Solco Bitumen Trowel Mastic can be applied at the edge of the lap joint for additional joint security if required.

14 Applications

Solid concrete floors

14.1 It is essential that the damp-proof membrane in the floor should be continuous with the damp-proof course in the surrounding walls. This is achieved by continuing the membrane up internal wall surfaces to tie in with the damp-proof course. A sand/cement screed should be laid immediately after the installation to prevent damage.

External tanking

14.2 When the foundation block extends beyond the concrete structure the membrane should be applied to the horizontal surface and extended up the outer face of the wall and cut into it.

14.3 A protection wall of brickwork, blockwork or protection board should be used against all the membrane, to protect it against puncture during backfilling, or subsequently by the backfill.

Internal tanking

14.4 The membrane should be applied to the site concrete base as well as to the interior face of the external wall. It should be tucked into the dpc and applied down the wall and 300 mm onto the site concrete base.

14.5 The product is applied to the walls to achieve the overlaps defined in section 13.2. A wall (preferably concrete) should be applied immediately after installation to protect the damp-proof membrane and to resist the action of external water pressure. Where brickwork or blockwork is used it should be set 40 mm away from the membrane to enable the space so formed to be thoroughly filled with a sand/cement mortar.

15 Repair

Damage to the product can be adequately repaired by patching prior to the application of protection or backfilling.

Technical Investigations

16 Tests

16.1 An assessment was made on existing tests data on Solsheet Self-Adhesive Membrane which were compared with EN 13969 : 2004 declared values in relation to:

- watertightness
- water vapour transmission
- tensile strength
- nail tear
- low-temperature flexibility
- static indentation.

16.2 Tests were carried out on samples of Solsheet Self-Adhesive Membrane and the results assessed:

- to determine
 - dimensional stability
 - tear strength
 - chisel impact
 - peel resistance
 - heat ageing
 - water soak
- to evaluate
 - stability
 - resistance to mechanical damage during installation
 - effectiveness of bond to substrate
 - durability
 - the effect of water on durability.

Bibliography

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

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

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

EN 13969 : 2004 *Flexible sheets for waterproofing — Bitumen damp proof sheets including bitumen basement tanking sheets — Definitions and characteristics*

Conditions of Certification

17 Conditions

17.1 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.

17.2 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.

17.3 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.

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

17.5 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.

17.6 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.