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Agrément Certificate
16/5294
Product Sheet 2

SIKALASTIC ROOF WATERPROOFING SYSTEMS

SIKALASTIC -618/SIKALASTIC -625 COMBINED SYSTEM

This Agrément Certificate Product Sheet(1) relates to the Sikalastic -618/Sikalastic -625 Combined System, consisting of moisture-triggered polyurethanes, for use as a glassfibre-reinforced waterproofing on flat roofs with limited access.

(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 system will resist the passage of moisture into the building (see section 6).
Properties in relation to fire — the system can enable a roof to be unrestricted under the national Building Regulations (see section 7).
Adhesion — the adhesion of the system is sufficient to resist the effects of any likely wind suction and the effects of thermal or other minor movement likely to occur in practice (see section 8).
Resistance to mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with installation and maintenance (see section 9).
Durability — under normal service conditions, the system will provide a durable waterproof covering with a service life of at least 10 years (see section 11).

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 First issue: 9 July 2018

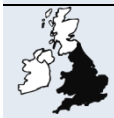
John Albon – Head of Approvals
Construction Products

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
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.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

Regulations

In the opinion of the BBA, the Sikalastic -618/Sikalastic -625 Combined 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 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: **B4(2)** **External fire spread**
Comment: On suitable substructures, the use of the system can enable a roof to be unrestricted under this Requirement. See section 7 of this Certificate.

Requirement: **C2(b)** **Resistance to moisture**
Comment: The system can satisfy this Requirement. See section 6.1 of this Certificate.

Regulation: **7** **Materials and workmanship**
Comment: The system is acceptable. See section 11 and the Installation part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation: **8(1)(2)** **Durability, workmanship and fitness of materials**
Comment: Use of the system satisfies the requirements of this Regulation. See sections 10 and 11 and the *Installation* part of this Certificate.

Regulation: **9** **Building standards applicable to construction**
Standard: 2.8 Spread from neighbouring buildings
Comment: The system, when applied to a non-combustible substrate, can be regarded as having low vulnerability under clause 2.8.1[(1)(2)] of this Standard. See section 7 of this Certificate.

Standard: 3.10 Precipitation
Comment: The use of the system will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1[(1)(2)] and 3.10.7[(1)(2)]. See section 6.1 of this Certificate.

Standard: 7.1(a) Statement of sustainability
Comment: The system 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 in relation to 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(a)(b)(i)** **Fitness of materials and workmanship**
Comment: The system is acceptable. See section 11 and the *Installation* part of this Certificate

Regulation: **28(b)** **Resistance to moisture and weather**
Comment: The use of the system can enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate.

Regulation:	**36(b)**	**External fire spread**
Comment:		On suitable substructures, the use of the system can enable a roof to be unrestricted under the requirements of this Regulation. See section 7 of this 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.

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

Additional Information

Registered office

The registered office of the Certificate holder is Sika Ltd, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1BQ. Registered in England: 226822.

Technical Specification

1 Description

1.1 The Sikalastic -618/Sikalastic -625 Combined System consists of the following components:

- Sikalastic -618 — a one-part, moisture-triggered, liquid-applied polyurethane roof waterproofing, applied as the system base coat
- Sikalastic -625 — a one-part, moisture-triggered, liquid-applied aliphatic polyurethane roof waterproofing, applied as the system top coat
- Sika Reemat Premium — a non-woven glassfibre reinforcing mat
- Sika Bonding Primer — a two-part primer for the preparation of porous substrates
- Sika Concrete Primer — a two-part primer for the preparation of concrete substrates
- Sikalastic Metal Primer — a two-part primer for the preparation for metal substrates, including plastisol-coated, and for spot priming of areas of corroded metal after preparation
- Sika Flexitape Heavy — a nylon mesh for use at fibre-cement/metal substrate joints.

1.2 The Sikalastic liquid waterproofing components characteristics are given Table 1.

Table 1 Sikalastic characteristics

Characteristics (unit)	Sikalastic -618	Sikalastic -625
density at +20°C (kg·ℓ$^{-1}$)	1.42	1.30
solids content by volume (%)	68.0	68.3
solids content by weight (%)	80.0	76.5
colours	Grey (RAL 7045) and Grey Green (RAL 7009)	Pebble Grey (RAL 7032), Cement Grey (RAL 7042), Light Grey (RAL 7035), White (RAL 9016) and Slate Grey (RAL 7015)

2 Manufacture

2.1 The liquid components of the system are 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.

2.3 The management system of Sika Limited has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 and BS EN ISO 14001 : 2004 by BSI (Certificates FM 12504 and EMS 588023 respectively).

3 Delivery and site handling

3.1 The liquid components are delivered to site in 5 or 15 litre tins for Sikalastic -618, and 15 litre tins for Sikalastic -625, bearing the product's name, batch number and the BBA logo incorporating the number of this Certificate.

3.2 The liquid components should be stored in a dry, shaded area, above freezing point and away from ignition sources. Storage temperatures of between 10 and 25°C will give the products a shelf-life of 9 months; at higher temperatures the shelf-life will reduce progressively. Once opened, tins should be used within two or three days.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the system components under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.* Users must refer to the relevant Safety Data Sheet(s).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Sikalastic -618/Sikalastic -625 Combined System.

Design Considerations

4 Use

4.1 The Sikalastic -618/Sikalastic -625 Combined System is satisfactory for use on flat and pitched roofs with limited access on:

- concrete (primed and unprimed)
- asphalt
- bituminous roofing membranes, including mineral surfaced.

4.2 The liquid components must not be applied directly to, nor come into contact with, polystyrene insulation products.

4.3 Limited access roofs are defined for the purposes of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged special precautions, such as additional protection to the membrane, must be taken.

4.4 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. Pitched roofs are defined as those having falls in excess of 1:6.

4.5 When designing flat roofs, twice the minimum finished fall should be assumed unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc.

4.6 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2003 and BS 8217 : 2005.

5 Practicability of installation

Installation of the system must be carried out only by specialist roofing contractors trained and approved by the Certificate holder.

6 Weathertightness

6.1 The system will adequately resist the passage of moisture to the inside of the building and so satisfy the relevant requirements of the national Building Regulations.

6.2 The system is impervious to water and, when used as described, will give a weathertight roofing capable of accepting minor movement without damage.

7 Properties in relation to fire

7.1 When tested to DD CEN/TS 1187 : 2012, and classified in accordance with BS EN 13501-5 : 2005:

- a system comprising a primed 12 mm plywood substrate, a layer of S-Vap 5000E SA self-adhesive vapour control layer, a layer of Primer 610 at 084 g·m^{-2}, 80 mm Sika Decotherm PIR insulation board, a layer of Primer 610 at 084 g·m^{-2}, a layer of S-Vap 5000E SA self-adhesive membrane acting as a carrier membrane, a base coat of Sikalastic -618 at an application rate of 1.0 ℓ·m^{-2}, a layer of Sika Reemat Premium, and a top coat of Sikalastic -625 at an application rate of 0.75 ℓ·m^{-2} achieved a B_{ROOF}(t4) classification
- a system comprising a 9 mm calcium silicate board, a base coat of Sikalastic -618 at an application rate of 1.0 ℓ·m^{-2}, a layer of Sika Reemat Premium and a top coat of Sikalastic -625 at an application rate of 0.75 ℓ·m^{-2} achieved a B_{ROOF}(t4) classification.

7.2 The designation of other specifications, eg when used on combustible substrates, should be confirmed by:

England and Wales — test or assessment in accordance with Approved Document B, Appendix A, clause 1
Scotland — test to conform to Mandatory Standard 2.8, clause 2.8.1[(1)(2)]

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

Northern Ireland — test or assessment by a UKAS-accredited laboratory, or an independent consultant with appropriate experience.

8 Adhesion

The adhesion of the system to the substrates indicated in section 4.1 is sufficient to resist the effects of any wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.

9 Resistance to mechanical damage

The system can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance. However, reasonable care should be taken to avoid puncture by sharp objects or concentrated loads.

10 Maintenance

10.1 The system must be the subject of annual inspections and maintenance to ensure continued performance in line with good practice.

10.2 Where damage has occurred, it should be repaired in accordance with section 15 and the Certificate holder's instructions.

11 Durability

The Sikalastic -618/Sikalastic -625 Combined System will achieve an initial life expectancy of at least 10 years.

Installation

12 General

12.1 Installation of the Sikalastic -618/Sikalastic -625 Combined System must be carried out only by specialist roofing contractors trained and approved by the Certificate holder.

12.2 The system must be at a temperature of, or greater than, 10°C for airless spray applications. All components must be applied when the air and substrate temperatures are greater than 5°C. Special precautions may be necessary when temperatures exceed 35°C, as shown in the Certificate holder's Technical Data Sheets.

12.3 Detailing (eg upstands) is carried out in accordance with the Certificate holder's instructions.

13 Site and surface preparation

13.1 Substrates on which the system is to be applied must be properly prepared in accordance with the Certificate holder's instructions.

13.2 Adhesion to substrates will depend on the condition and cleanness of the substrate. Substrates must be visibly dry, sound and free from loose materials or contamination (eg moss or algae).

13.3 The surface must be prepared to remove loose or flaking materials, but the substrate must be visibly dry before application of the system.

13.4 Damaged areas of the substrate (eg blistered bitumen) must be removed, replaced or repaired. Substrate defects (eg shallow-bottomed cracks and indentations) must be filled. The Certificate holder can advise on suitable filling materials.

13.5 Deck surfaces must be free from sharp projections, such as concrete nibs.

13.6 Gutters and outlets must be checked to ensure that they are, and remain, clear of all debris.

13.7 All points of potential weakness such as splits, cracks, joints and crazed surfaces must be additionally reinforced in accordance with the Certificate holder's instructions prior to application of the system.

13.8 Priming, if required, is with the appropriate primer in accordance with the Certificate holder's recommended coverage rates.

14 Application

14.1 Application can be by brush, roller or spray. Brush application is normally used only for small roof areas and for embedding the Sika Reemat Premium reinforcing mat into the waterproofing.

14.2 Prior to application, checks must be made to ensure that the substrate is dry (ie free from rainwater, surface condensation and frost) and that the prevailing weather and site conditions are correct. The following normal limitations apply:

- application must not take place when the relative humidity is in excess of 95%, or in fog. The temperature/humidity must be such that there is no risk of surface condensation occurring before or during application
- the primer, where used, must be cured

- the wind speed must be such that it does not interfere with the application or cause overspray. No attempt to spray should be made if the wind speed exceeds 6.7 $m \cdot s^{-1}$ (15 mph), unless precautions such as the use of wind barriers are taken.

14.3 Only areas that can be sprayed to the full thickness before weather changes occur should be attempted.

14.4 The system is applied at the coverage rate for a smooth texture substrate given below. The advice of the Certificate holder on coverage rates for intermediate, rough, porous and undulating substrates must be sought. When using the Sika Reemat Premium reinforcing mat, this is embedded in the first coat while the membrane is still wet. Once the first coat is partially cured the second coat is applied:

base coat (Sikalastic -618)	1.00 $ℓ \cdot m^{-2}$
reinforcement	Sika Reemat Premium
top coat (Sikalastic -625)	0.75 $ℓ \cdot m^{-2}$
finished thickness	1.3 mm.

14.5 Random tests are carried out on the finished coating surface by cutting out small areas to measure finished cured thickness. Test areas must be repaired after the sample is taken.

15 Repair

The repair of minor damage to the system can be achieved effectively by cleaning back to the unweathered material and recoating the damaged area with the membrane at the application rates stated in section 14.4.

Technical Investigations

16 Tests

16.1 Existing test data were assessed to determine:

- water vapour transmission
- watertightness
- delamination strength on
  - concrete
  - asphalt
  - bitumen roofing membrane
- dynamic indentation
- static indentation
- resistance to fatigue movement
- low service temperature properties
- high service temperature properties
- resistance to heat ageing
- resistance to UV ageing
- resistance to water ageing
- variation in application temperature.

16.2 Identification tests were carried on the system components.

17 Investigations

17.1 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.

17.2 Data on external fire performance and reaction to fire were evaluated.

Bibliography

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

BS EN 13501-5 : 2005 + A1 : 2009 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests*

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

BS EN ISO 14001 : 2004 *Environmental management systems — Requirements with guidance for use*

DD CEN/TS 1187 : 2012 *Test methods for external fire exposure to roofs*

18 Conditions

18.1 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 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.

18.2 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.

18.3 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.

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

18.5 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.

18.6 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.