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20/5789 Product Sheet 2 Issue 2

BAUDER LIQUITOP LIQUID APPLIED ROOF WATERPROOFING SYSTEMS

BAUDER LIQUITOP 3COAT SYSTEM COLD APPLIED LIQUID ROOF WATERPROOFING

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing, for use on new and existing flat and pitched roofs with limited access and in blue roof systems in conjunction with a storm water attenuation system⁽²⁾.

(1) Hereinafter referred to as 'Certificate'.

(2) The storm water attenuation system is outside the scope of this Certificate.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or nonregulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements †:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

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 Second issue: 19 March 2025

Originally certified on 19 November 2020

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Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation. The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357). Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation. Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that the Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:

| AND | The Buildin | g Regulations 2010 (England and Wales) (as amended) |
|---|-----------------|--|
| Requirement: Comment: | B4(1) | External fire spread The system is restricted by this Requirement in some circumstances. See section 2 of this Certificate. |
| Requirement: Comment: | B4(2) | External fire spread On a suitable substructure, the system may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate. |
| Requirement: Comment: | C2(b) | Resistance to moisture The system, including joints, will enable a roof to satisfy this Requirement. See section 3 of this Certificate. |
| Regulation: Comment: | 7(1) | Materials and workmanship The system is acceptable. See sections 8 and 9 of this Certificate. |
| El e z | The Buildin | g (Scotland) Regulations 2004 (as amended) |
| Regulation: Comment: | 8(1)(2) | Fitness and durability of materials and workmanship The system is acceptable. See sections 8 and 9 of this Certificate. |
| Regulation: Standard: Comment: | 9 2.8 | Building standards – construction Spread from neighbouring buildings When applied to suitable substructures, the system may enable a roof to be unrestricted by this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate. |
| Standard: Comment: | 3.10 | Precipitation The system, including joints, will enable a roof to satisfy this Standard, with reference to clauses $3.10.1^{(1)(2)}$ and $3.10.7^{(1)(2)}$. See section 3 of this Certificate. |
| Standard: Comment: | 7.1(a) | Statement of sustainability The system can contribute to satisfying 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: Comment: | 12 | Building standards – conversion All comments given for 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). |

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The Building Regulations (Northern Ireland) 2012 (as amended)

| Regulation: Comment: | 23(1)(a)(i)(ii) (iii)(iv)(b)(i) | Fitness of materials and workmanship The system is acceptable. See sections 8 and 9 of this Certificate. |
|--------------------------------|------------------------------------|--|
| Regulation: Comment: | 28(b) | Resistance to moisture and weather The system, including joints, will enable a roof to satisfy of this Regulation. See section 3 of this Certificate. |
| Regulation Comment: | 36(a) | External fire spread The system is restricted by this Regulation in some circumstances. See section 2 of this Certificate. |
| Regulation Comment: | 36(b) | External fire spread On suitable substructures, the system may enable a roof to be unrestricted under this Regulation. See section 2 of this Certificate. |

Additional Information

NHBC Standards 2025

In the opinion of the BBA, the Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to NHBC Standards, Chapter 7.1 *Flat roofs, terraces and balconies*.

In addition, in the opinion of the BBA, the system when installed and used in accordance with this Certificate can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the system.

The NHBC Standards do not cover the refurbishment of existing roofs.

Fulfilment of Requirements

The BBA has judged the Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing to be satisfactory for use as a roof waterproofing on new and existing flat and pitched roofs with limited access, and in blue roof systems in flat and zero-fall roofs in conjunction with a storm water attenuation system⁽¹⁾.

(1) The storm water attenuation system is outside the scope of this Certificate.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. The Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing consists of:

- Bauder LiquiTop PU Mist Grey and Bauder LiquiTOP PU Dark Grey a single-part (moisture triggered) polyurethane
- Bauder LiquiTOP Glass Fibre Mat for use as system reinforcement
- Bauder LiquiTOP General Purpose Primer a one-part primer, for preparing exposed bitumen roofing membranes and porous asphalt, cementitious and timber substrates where required
- Bauder LiquiTOP PVC Primer a one-part primer, for preparing PVC single-ply membranes, prior to application of the embedment coat
- Bauder LiquiTOP Epoxy Primer a two-part primer for preparing metal substrates
- Bauder LiquiTOP Reactivation Primer for preparing Bauder LiquiTOP PU left for more than five days and aged areas under repair, prior to the application of new coats.

The system has the nominal characteristics given in Table 1.

| , | , | / | ,, , | 3 1 | , , |
|--------------------------|------------------------|-----------------|------------|--------------|---------------|
| Physical characteristics | Bauder LiquiTop PU | General Purpose | PVC Primer | Epoxy Primer | Reactivation |
| | | Primer | | Part A/B | Primer |
| Colour | Mist grey or dark grey | Brown | Clear | Beige | Clear |
| Cure/drying time at 20°C | 6 to 12 hours | 60 to 120 | 20 to 60 | 2 to 4 hours | 4 hours |
| | | minutes | minutes | | approximately |

| Table 1 Physical characteristics of Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing |
|---|
|---|

Applications

The system is intended for use on the following substrates:

- concrete
- asphalt
- bituminous roofing membranes (including mineral surfaced)
- steel
- PVC membranes
- existing polyurethane coatings
- plywood, in conjunction with a specified carrier membrane
- polyisocyanurate (PIR) foam insulation boards, in conjunction with a carrier membrane
- mineral wool (MW) insulation boards, in conjunction with a carrier membrane.

Definitions for products and applications inspected

- limited access roof a roof subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc
- flat roof a roof having a minimum finished fall of 1:80
- pitched roof a roof having a fall in excess of 1:6
- zero fall roof a roof having a minimum finished fall between 0 and 1:80
- blue roof a flat roof designed to allow controlled attenuation of rain fall during heavy and storm events, as part of sustainable urban drainage systems (SUDS).

Product assessment – key factors

The system was assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 When tested to DD CEN/TS 1187 : 2012, Test 4 and classified to BS EN 13501-5 : 2016, the constructions given in Table 2 of this Certificate achieved B_{ROOF}(t4).

| Table 2 External fire spread tests | | | | | |
|------------------------------------|---|-----------------------------------|--------------------|-------------|------|
| Construction | 1 | 2 | 3 | 4 | 5 |
| Test orientation | Flat | Sloped | Sloped | Flat | Flat |
| Substrate ⁽¹⁾ | | An 18 mm thick | corientated strand | board (OSB) | |
| Primer ⁽¹⁾ | N/A | N/A N/A Spray applied N | | | N/A |
| AVCL ⁽¹⁾ | N/A | N/A 0.6 mm thick self-adhesive N/ | | N/A | |
| Insulation ⁽¹⁾ | N/A | N/A | 60 mm PIR | 240 mm PIR | N/A |
| Primer ⁽¹⁾ | Spray applied | | | | |
| Carrier membrane ⁽¹⁾ | 0.6 mm thick self-adhesive | | | | |
| Basecoat | A layer of Bauder LiquiTop PU applied at 1.0 l·m ⁻² (1.5 kg·m ⁻²) | | | | |
| Reinforcement | 225 g·m ⁻² Bauder LiquiTOP glass fibre mat embedded | | | | |
| Topcoat | Two layers of Bauder LiquiTop PU applied at 0.75 l·m ⁻² (1.125 kg·m ⁻² per layer) | | | | |

Table 2 External fire spread tests (continued)

| Construction | 6 7 8 9 | | | |
|---------------------------------|---|------------------------|------------------------|-----------|
| Test orientation | Flat | Flat | Flat | Flat |
| Substrate ⁽¹⁾ | A | n 18 mm thick orientat | ted strand board (OSB) | |
| Primer ⁽¹⁾ | | Spray a | pplied | |
| AVCL ⁽¹⁾ | 0.6 mm thick self-adhesive | | | |
| Insulation ⁽¹⁾ | 25 mm PIR | 30 mm MW | 550 mm PIR | 565 mm MW |
| Primer ⁽¹⁾ | Spray applied | | | |
| Carrier membrane ⁽¹⁾ | 0.6 mm thick self-adhesive | | | |
| Basecoat | A layer of Bauder LiquiTop PU applied at 1.0 l·m ⁻² (1.5 kg·m ⁻²) | | | |
| Reinforcement | 225 g·m ^{−2} Bauder LiquiTOP glass fibre mat embedded | | | |
| Topcoat | Two layers of Bauder LiquiTop PU applied at 0.75 l·m ⁻² (1.125 kg·m ⁻² per layer) | | | |

Flat roofs – the test is applicable to systems applied to roofs of pitches between 0 and 10° Sloped roofs – the test is applicable to systems applied to roofs of pitches between 10 and 70° PIR: polyisocyanurate insulation board MW: mineral wool insulation

(1) Outside the scope of this Certificate.

2.1.2 On the basis of data assessed, the constructions listed in Table 2 of this Certificate will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a relevant boundary. Restrictions, of the deck used, may apply at junctions with compartment walls.

2.1.3 A blue roof incorporating the system will be unrestricted under the national Building Regulations when used in conjunction with an inorganic covering listed in the Annex of Commission Decision 2000/553/EC.

2.1.4 The classification and permissible areas of use of other specifications must be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

2.2 Reaction to fire

2.2.1 The Certificate holder has not declared a reaction to fire classification for the Bauder LiquiTOP 3COAT System Cold Applied Liquid Roof Waterproofing.

2.2.2 On the basis of data assessed, the system will be restricted in use under the documents supporting the national Building Regulations in some cases.

2.2.3 In England, the system, when used for roof pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on residential buildings more than 11 m in height, or on other buildings more than 18 m in height. These constructions must also be included in calculations of unprotected area.

2.2.4 In Wales, the system, when used for roof pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on other buildings more than 18 m in height. These constructions must also be included in calculations of unprotected area.

2.2.5 In Northern Ireland, for systems used in pitches greater than 70°, excluding upstands, that do not achieve the minimum Class E reaction to fire classification to BS EN 13501-1 : 2018, designers must seek guidance on the proposed use of the system from the relevant Building Control Body.

2.2.6 In Scotland, the use of the systems is unrestricted with respect to building height and proximity to a relevant boundary. However, restrictions on the overall construction may apply, depending on the reaction to fire classification achieved by the complete system, which must be established on a case-by -case basis.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

| Table 3 Results of weathertightness tests | | | |
|--|-------------------------------------|-------------|--------|
| System assessed | Assessment method | Requirement | Result |
| Bauder LiquiTOP 3COAT System Cold Applied | Watertightness to | No leakage | Pass |
| Liquid Roof Waterproofing | EOTA TR-003 : 2004 | | |
| Bauder LiquiTOP 3COAT System Cold Applied | Watertightness under 60 kPa | No leakage | Pass |
| Liquid Roof Waterproofing | pressure to EN 1928 : 2000 for 24 h | | |
| Bauder LiquiTOP 3COAT System Cold Applied | Delamination strength to | | |
| Liquid Roof Waterproofing | EOTA TR-004 : 2004 | | |
| - on concrete | | ≥50 kPa | Pass |
| - on asphalt | | ≥50 kPa | Pass |
| on bituminous membrane | | ≥50 kPa | Pass |
| - on plywood | | ≥50 kPa | Pass |
| - on PVC membrane | | ≥50 kPa | Pass |
| - on steel | | ≥50 kPa | Pass |
| - on carrier membrane on PIR insulation | | ≥50 kPa | Pass |
| - day joint | | ≥50 kPa | Pass |

3.1.2 On the basis of data assessed, the system will adequately resist the passage of moisture to the interior of a building and enable a roof to comply with the requirements of the national Building Regulations.

3.1.3 The adhesion of the bonded system is sufficient to resist the effects of wind suction, elevated temperature and thermal shock conditions likely to occur in practice and remain weathertight.

3.2 <u>Resistance to mechanical damage</u>

3.2.1 Results of resistance to mechanical damage tests are given in Table 4.

| System assessed | tance to mechanical damage tests Assessment method | Requirement | Result |
|----------------------|--|----------------|------------------------------|
| Bauder LiquiTOP | Tensile strength to BS EN 527-1 : 2012 | Value achieved | 1677 N·(50 mm) ⁻¹ |
| 3COAT System Cold | and BS EN 527-3 : 2018 | | |
| Applied Liquid Roof | (material non-directional) | | |
| Waterproofing | | | |
| Bauder LiquiTOP | Elongation properties to BS EN 527-1 : 2012 and | Value achieved | 2.9% |
| 3COAT System Cold | BS EN 527-3 : 2018 | | |
| Applied Liquid Roof | (material non-directional) | | |
| Waterproofing | | | |
| Bauder LiquiTOP | Dynamic indentation to | Value achieved | |
| 3COAT System Cold | EOTA TR-006 : 2004 | | |
| Applied Liquid Roof | | | |
| Waterproofing | | | |
| on steel | tested at 20°C | | I 4 |
| | tested at -20°C | | I 4 |
| on PIR insulation on | tested at 20°C | | l ₂ |
| carrier membrane | | | |
| Bauder LiquiTOP | Static indentation to EOTA TR-007 : 2003 | Value achieved | |
| 3COAT System Cold | | | |
| Applied Liquid Roof | | | |
| Waterproofing | | | |
| on steel | tested at 23°C | | L4 |
| | tested at 80°C | | L4 |
| | after water exposure (at 60°C for 180 days) | | |
| | tested at 23°C | | L4 |
| | tested at 80°C | | L4 |
| on PIR insulation on | tested at 23°C | | L4 |
| carrier membrane | | | |
| Bauder LiquiTOP | Fatigue movement to EOTA TR 008 : 2004 for | Watertight and | Pass |
| 3COAT System Cold | 1000 cycles less than 75 mm | | |
| Applied Liquid Roof | | delamination | |
| Waterproofing | | from substrate | |

3.2.2 On the basis of data assessed, the system can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance. Reasonable care must be taken to avoid puncture by sharp objects or concentrated loads.

3.2.3 The system is capable of accepting minor structural movement while remaining weathertight. Where the system is installed over carrier membranes on insulation, the resistance to wind uplift is dependent on the cohesive strength of the insulation.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the system were assessed.

8.2 Specific test data were assessed as given in Table 5.

| Table 5 Results of dur | ability tests | | |
|------------------------|---|-----------------|------------------------------|
| System assessed | Assessment method | Requirement | Result |
| Bauder LiquiTOP | Tensile strength to BS EN ISO 527-1 : 2012 and | Value achieved | |
| 3COAT System Cold | BS EN ISO 527-3 : 2018 | | |
| Applied Liquid Roof | after UV ageing for 800 MJ·m ⁻² | | 1638 N·(50 mm)⁻¹ |
| Waterproofing | after heat ageing at 70°C for 200 days | | 1242 N·(50 mm) ⁻¹ |
| Bauder LiquiTOP | Elongation properties to BS EN ISO 527-1 : 2012 and | Value achieved | |
| 3COAT System Cold | BS EN ISO 527-3 : 2018 | | |
| Applied Liquid Roof | after UV ageing for 800 MJ·m ⁻² | | 2.6% |
| Waterproofing | after heat ageing at 70°C for 200 days | | 2.5% |
| Bauder LiquiTOP | Delamination strength to EOTA TR004 : 2004 after | ≥50kPa | Pass |
| 3COAT System Cold | water exposure for 60°C for 180 days | | |
| Applied Liquid Roof | | | |
| Waterproofing | | | |
| on concrete | | | |
| Bauder LiquiTOP | Dynamic indentation to EOTA TR-006 : 2004 | Value achieved | |
| 3COAT System Cold | after UV ageing for 1000 MJ·m ⁻² tested at -10°C | | 4 |
| Applied Liquid Roof | after heat ageing at 70°C for 200 days tested at -30°C | | 4 |
| Waterproofing | | | |
| on steel | | | |
| Bauder LiquiTOP | Static indentation to EOTA TR-007 : 2003 after water | Value achieved | |
| 3COAT System Cold | exposure for 60°C for 60 days | | |
| Applied Liquid Roof | tested at 23°C | | L4 |
| Waterproofing | tested at 80°C | | L4 |
| on steel | | | |
| Bauder LiquiTOP | Fatigue movement to EOTA TR-008 : 2004 for 50 | Watertight and | |
| 3COAT System Cold | cycles after heat ageing at 70°C for 200 days | less than 75 mm | Pass |
| Applied Liquid Roof | | delamination | |
| Waterproofing | | from substrate | |

8.3 Service life

Under normal service conditions, the system will provide a durable waterproof covering with a service life in excess of 25 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 <u>Design</u>

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance specified in this Certificate.

9.1.2 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018 and, where appropriate, *NHBC Standards* 2024, Chapter 7.1.

9.1.3 For design purposes or flat roofs, twice the minimum finished fall must be assumed unless a detailed structural analysis of the roof is available, including overall and local deflection, direction of falls, etc.

9.1.4 For blue applications, the substrate must be a suitably designed structural deck.

9.1.5 Structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance needs to be made for loading deflections to ensure that the free drainage of water is maintained.

9.1.6 Imposed loads, dead loads and wind loads must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

9.1.7 The drainage systems for zero fall roofs must be correctly designed, and the following points must be addressed:

• for zero fall roofs, it is particularly important to identify the correct drainage points, to ensure that drainage is sufficient and effective.

9.1.8 Insulation materials used in conjunction with the membranes must be in accordance with the manufacturer's instructions and be either:

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and be used in accordance with, and within the scope of, that Certificate.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions.

9.2.3 All of the system components must be applied when the air and substrate temperatures are greater than 5°C. Special precautions may be necessary when temperatures exceed 30°C and advice must be obtained from the Certificate holder, but such advice is outside the scope of this Certificate.

9.2.4 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).

9.2.5 Damaged areas of the substrate (eg blistered membrane) must be removed, replaced or repaired. Substrate defects (eg shallow-bottomed cracks and indentations) must be filled, in accordance with the Certificate holder's instructions.

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

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

9.2.8 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.

9.2.9 Substrates must be primed in accordance with the Certificate holder's instructions. The Certificate holder recommends peel-strength adhesion tests are carried out on-site, prior to application, in order to ensure sufficient adhesion is achieved and to determine priming requirements.

9.2.10 Primer coverage rates are given in Table 6.

| Table 6 Primer application rates | |
|--|---|
| Primer | Application rate (m ² ·l ⁻¹) |
| Bauder LiquiTOP General Purpose Primer | 16 to 20 |
| Bauder LiquiTOP Epoxy Primer | 10 to 20 |
| Bauder LiquiTOP PVC Primer | 5 to 8 |
| Bauder LiquiTOP Reactivation Primer | 8 to 10 |

9.2.11 The primers can be applied by brush or roller. Brush application is normally used only for small roof areas and for embedding the fibre mat reinforcement into the waterproofing at areas of detailing.

9.2.12 Work must only commence on an area if it can be carried out to the full thickness for that particular coat, before weather changes occur. Where weather interrupts installation between layers, installation can proceed for up to five days, provided the surface is clean, without the need for Bauder LiquiTOP Reactivation Primer .

9.2.13 For a smooth texture substrate, the system is applied at the coverage rates given in Table 7. The advice of the Certificate holder on coverage rates for intermediate, rough, porous and undulating substrates must be sought. The Bauder LiquiTOP Glass Fibre Mat is embedded in first coat of Bauder LiquiTOP PU while the membrane is still wet, ensuring a minimum overlap of 50 mm of runs of the reinforcement.

| Table 7 System coverage rates and finished thickness | | | |
|---|-------------------------------------|--|--|
| Layer (unit) | Full reinforcement system | | |
| Bauder LiquiTOP PU Embedment Coat (I·m ⁻²) | 1.0 | | |
| Reinforcement | 225 g·m ^{−2} reinforcement | | |
| Bauder LiquiTOP PU Intermediate Coat (I·m ⁻²) | 0.75 | | |
| Bauder LiquiTOP PU Top Coat (I·m ⁻²) | 0.75 | | |

9.2.14 The embedment coat is left to cure, prior to the application of the intermediate coat of Bauder LiquiTOP PU at the coverage rate given in Table 7 and left to cure. The top coat is then applied and allowed to cure before any trafficking of the surface is allowed.

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

9.2.16 The NHBC requires that the roof membranes, once installed, are inspected in accordance with *NHBC Standards* 2024, Chapter 7.1, Clause 7.1.11, and undergo an appropriate integrity test, where required. Any damage to the membrane must be repaired in accordance with section 9.4 of this Certificate and reinspected.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the system must be carried out by contractors who have been trained and approved by the Certificate holder and in accordance with the relevant clauses of BS 8000-0 : 2014 and BS 8000-4 : 1989.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the system in use requires that it is suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 The repair of minor damage to the system can be achieved effectively by cleaning back to the unweathered material with clean water or diluted detergent solution, allowing to dry, reactivating using Bauder LiquiTOP Reactivation Primer if over five days old, and recoating the damaged area with the membrane at the recommended coverage rates given in section 9.2.

10 Manufacture

10.1 The production processes for the system have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

11 Delivery and site handling

11.1 The packaging of liquid components bears the product name, batch number and health and safety data. Table 8 gives the packaging types and sizes

| Table 8 Packaging sizes and types | | | |
|--|----------------|-----------|--------------------------|
| System component | Packaging type | Size | Storage temperature (°C) |
| Bauder LiquiTOP PU | Cans | 15 litres | 5 to 25 |
| Bauder LiquiTOP PVC Primer | Cans | 5 litres | 5 to 25 |
| Bauder LiquiTOP General Purpose Primer | Cans | 5 litres | 5 to 25 |
| Bauder LiquiTOP Epoxy Primer (Part A and | Kits | 4 litres | 5 to 25 |
| Part B) | | | |
| Bauder LiquiTOP Reactivation Primer | Cans | 5 litres | 5 to 25 |

11.2 The liquid components must be stored in a dry, shaded area and away from ignition sources.

†ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the system but has not formed part of the material assessed for the Certificate.

<u>Construction (Design and Management) Regulations 2015</u> 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.

CLP Regulations

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

Additional information on installation

A.1 For design purposes of zero falls roofs, reference must be made to appropriate clauses in the Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*.

A.2 Guidance for the design and construction of blue roofs is available in the NFRC Technical Guidance Note for the construction and design of Blue Roof – Roofs and podiums with controlled temporary water attenuation.

A.3 Installation of the system must be carried out in accordance with the relevant clauses of Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roof Falls*.

Bibliography

BS 6229 : 2018 Flat roofs with continuously supported flexible waterproof coverings - Code of practice

BS 8000-0 : 2014 + A1 : 2024 Workmanship on construction sites — Introduction and general principles BS 8000-4 : 1989 Workmanship on construction sites — Code of practice for waterproofing

BS EN ISO 527-1 : 2012 Plastics - Determination of tensile properties. Part 1 : General properties BS EN ISO 527-3 : 2018 Plastics – Determination of tensile properties. Part 3: Test conditions for films and sheets.

BS EN 1991-1-1 : 2002 Eurocode 1 : Actions on structures — General actions — Densities, self-weight, imposed loads for buildings

NA to BS EN 1991-1-1 : 2002 UK National Annex to Eurocode 1 : Actions on structures — General actions — Densities, self-weight, imposed loads for buildings

BS EN 1991-1-3 : 2003 + A1 : 2015 Eurocode 1 : Actions on structures — General actions — Snow loads NA +A1 : 18to BS EN 1991-1-3 : 2003 +A1 : 2015 UK National Annex to Eurocode 1 : Actions on structures — General actions — Snow loads

BS EN 1991-1-4 : 2005 + A1 : 2010 Eurocode 1 : Actions on structures — General actions — Wind actions NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to Eurocode 1 : Actions on structures — General actions — Wind actions

BS EN 13501-1 : 2018 Fire classification of construction products and building elements — Classification using data from reaction to fire tests

BS EN 13501-5 : 2016 Fire classification of construction products and building elements — Classification using data from external fire exposure to roofs tests

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

EOTA Technical Report TR-003 : May 2004 Determination of the watertightness EOTA Technical Report TR-004 : May 2004 Determination of the resistance to delamination EOTA Technical Report TR-006 : May 2004 Determination of the resistance to dynamic indentation EOTA Technical Report TR-007 : June 2003 Determination of the resistance to static indentation EOTA Technical Report TR-008 : May 2004 Determination of the resistance to fatigue movement

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Conditions

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