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Agrément Certificate

18/5536

Product Sheet 1

LIQUASIL METAL ROOF PROTECTIVE COATINGS

METALSEAL SF AND METALSEAL 20

This Agrément Certificate Product Sheet⁽¹⁾ relates to MetalSeal SF and MetalSeal 20, for use as protective coatings for existing galvanized steel and plastisol coated steel roofing 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

Properties in relation to fire — steel roofs to which the products are applied remain unrestricted under the national Building Regulations (see section 6).

Protection from corrosion — the products will provide satisfactory resistance to corrosion of the steel substrates (see section 7).

Resistance to mechanical damage — suitable protection of the products should be used when access to the roof area is required (see section 8).

Adhesion — the adhesion of the products to the substrates is satisfactory (see section 9).

Durability — under normal service conditions, the products will provide a durable protection coating with a service life of up to 25 years (see section 11).



The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 16 May 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.

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Regulations

In the opinion of the BBA, MetalSeal SF and MetalSeal 20, 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:		The products can contribute to a roof satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The products are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The use of the products satisfies the requirements of this Regulation. See sections 10 and 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.8	Spread from neighbouring buildings
Comment:		The products, when applied to a non-combustible substrate, can be regarded as having low vulnerability under clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard and therefore will not affect the classification of the roof. See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products 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 products 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 products are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	36b	External fire spread
Comment:		The products can contribute to a roof satisfying this Regulation. See section 6 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.

Technical Specification

1 Description

1.1 The products covered by this Certificate are:

- MetalSeal SF — a one-component, silicone based solvent-free, liquid-applied, water repellent coating, for brush or roller application. The standard colour is Goosewing Grey, but a range of RAL colours are available subject to a minimum quantity of 100 litres
- MetalSeal 20 — based on MetalSeal SF, with the addition of 20% solvent to allow spray application. The standard colour is Goosewing Grey, but a range of RAL colours are available subject to a minimum quantity of 100 litres.

1.2 Ancillary items for use with the products, and within the scope of this Certificate, are:

- FlexLap — used in conjunction with the products for use as a cut edge protection against corrosion (see Product Sheet 2 of this Certificate)
- Liquasil SWT Primer — used to prepare areas of corrosion on the substrate prior to the application of the products.

2 Manufacture

2.1 The products 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.

3 Delivery and site handling

3.1 The products are delivered to site in airtight containers, five litre for MetalSeal SF and 20 litre for MetalSeal 20, bearing the Certificate holder's details, product name, hazard labels, transportation information, colour, expiry date and batch number.

3.2 The products must be stored between 5 and 25°C under well-ventilated, dry and frost-free conditions and away from direct sunlight, oxidising agents, acids and, in the case of MetalSeal 20, sources of ignition.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the products 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 MetalSeal SF and MetalSeal 20.

Design Considerations

4 Use

4.1 MetalSeal SF and MetalSeal 20 are satisfactory for use as protective coatings against corrosion for existing galvanized steel and plastisol coated steel roofs with limited access.

4.2 Limited access roofs are defined for the purposes of this Certificate as those subjected only to pedestrian traffic for actions such as maintenance of the roof covering, cleaning of gutters etc, with suitable precautions in place to prevent damage to the coating.

4.3 Decks to which the products are to be applied must comply with the relevant requirements of BS 6229 : 2003.

5 Practicability of installation

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

6 Properties in relation to fire



6.1 A system comprising a 1 mm thick steel substrate, a coat of primer and a 0.1 mm coat of either of the products will achieved a rating of EXT.S.AB, as defined in BS 476-3 : 2004.

6.2 The designation of other specifications 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.

7 Protection from corrosion

7.1 The products will protect the steel substrates they are applied to from all normal atmospheric corrosive conditions, including coastal and industrial conditions (see sections 7.2 and 11.2).

7.2 Where the products are to be installed in heavily polluted areas, such as near chemical works or foundries, the advice of the Certificate holder must be sought.

8 Resistance to mechanical damage

The products are resistant to abrasion, but can be damaged by concentrated loads and impacts. Where pedestrian access is required for maintenance, suitable precautions to prevent damage to the coating, such as walkways, should be used.

9 Adhesion

The adhesion of the products to plastisol coated steel and galvanized steel is satisfactory.

10 Maintenance



10.1 The coated roofs 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 14 and the Certificate holder's instructions.

11 Durability



11.1 Under normal service conditions, the products will provide a durable protection coating for the steel substrate with a service life of up to 25 years.

11.2 In areas of high industrial pollution, the durability of the products will be reduced and may require recoating at regular intervals.

Installation

12 General

12.1 Application of MetalSeal SF and MetalSeal 20 is in accordance with the Certificate holder's instructions and this Certificate.

12.2 Substrates to which the products are to be applied must be clean, free from loose and flaking material, degreased and dry.

12.3 Installation should not be carried out during inclement weather (eg rain, fog or snow), when rain is expected within two hours of application or at temperatures below -5°C . In conditions where surface condensation is forming on the substrate, suitable measures must be taken in accordance with the Certificate holder's instructions to remove the moisture.

12.4 Areas of rust and any bolt heads are treated with Liquasil SWT Primer, applied using either a brush or roller, at a coating rate of approximately $6\text{ m}^2\cdot\ell^{-1}$ prior to the application of the coating. Depending on weather and temperature conditions, Liquasil SWT Primer is touch dry in 2 to 24 hours. Time before application of the MetalSeal to the primer is unlimited.

12.5 Any cut edges on the metal sheets are either:

- treated with Liquasil SWT Primer and overcoat with FlexLap or
- treated with Liquasil SWT Primer and overcoat with two coats of MetalSeal 20 or MetalSeal SF.

12.6 Holes in the substrate caused by corrosion are filled prior to coating. The advice of the Certificate holder should be sought for suitable materials.

13 Procedure

13.1 Installation of the coatings is carried out either by brush or roller for MetalSeal SF, or airless spray for MetalSeal 20.

13.2 The products are normally applied as a single coat at $3\text{ to }4\text{ m}^2\cdot\ell^{-1}$. A second application may be made to give a smooth finish on uneven substrates.

13.3 The products are rainproof in one to two hours and thoroughly dry in eight hours, though this can vary with temperature and humidity levels, in cases of doubt the Certificate holder should be consulted.

14 Repair

The repair of minor damage to the products can be achieved effectively by cleaning back to the unweathered material and recoating the damaged area with the products, at the application rates stated in section 13.2.

15 Tests

Tests were carried out on the products and the results assessed to determine:

- infrared analysis
- solids content
- water vapour permeability
- abrasion resistance
- dynamic indentation
- static loading
- delamination strength
- sulfur dioxide exposure
- salt fog exposure
- heat ageing
- UV ageing.

16 Investigations

16.1 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.

16.2 Data on fire performance were evaluated.

16.3 A visit was made to a site in progress to assess the practicability of installation.

Bibliography

BS 476-3 : 2004 *Classification and method of test for external fire exposure to roofs*

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

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 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.