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Agrément Certificate
20/5804
Product Sheet 1

HD SHARMAN PROTECTIVE ROOF COATING SYSTEMS

DELCOTE ARCHITECTURAL ROOF COATING SYSTEM

This Agrément Certificate Product Sheet(1) relates to the Delcote Architectural Roof Coating System, for use as a liquid-applied protective coating for existing galvanized steel roofing (including plastisol coated) against corrosion for galvanized metal roofing sheets.

(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 is water repellent and will support water run-off from the roof (see section 6).

Properties in relation to fire — the system will not affect the fire classification of the roof (see section 7).

Protection from corrosion — the system will provide satisfactory resistance to corrosion of steel substrates (see section 8).

Adhesion — the adhesion of the system is sufficient to resist the effects of any likely wind suction and the effects of any thermal expansion or other minor movement likely to occur in practice (see section 9).

Resistance to mechanical damage — the system will resist, without damage, the limited foot traffic and loads associated with installation and maintenance (see section 10).

Durability — the system will provide a durable protection coating with a service life in excess of 25 years (see section 12).

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: 29 September 2020

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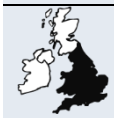
Regulations

In the opinion of the BBA, the Delcote Architectural Roof Coating 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:		The system may be unrestricted under this Requirement. See sections 7.1 and 7.2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The system can contribute to a roof satisfying this Requirement. See section 6 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The system is acceptable. See section 12 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:		The use of the system satisfies the requirements of this Regulation. See sections 11.1 and 12 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, may be unrestricted under clause 2.8.1(1)(2) of this Standard. See sections 7.1 and 7.2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The system can contribute to 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 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)**	**Fitness of materials and workmanship**
Comment:	**(b)(i)**	The system is acceptable. See section 12 and the *Installation* part of this Certificate.

Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The system can contribute to a roof satisfying this Regulation. See section 6 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		The system may be unrestricted under this Regulation. See sections 7.1 and 7.2 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* (3.3 and 3.4) of this Certificate.

Technical Specification

1 Description

The Delcote Architectural Roof Coating System consists of:

- Seamsil Sealant — an alkoxy moisture curing sealant, gun-applied into the gap between the upper and lower sheets to form a completely bridged seal
- Seamsil Basecoat — an alkoxy curing sealant suspended within a solvent carrier, based on Seamsil Sealant with the addition of solvent to allow brush application
- Delcote Coating — a silicone – based topcoat, applied by spray, brush or roller in two coats, available in three basic colours: Albany, Slate and Goosewing Grey.

2 Manufacture

2.1 The system components 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 HD SHARMAN has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by NQA (Certificate Number 9392).

3 Delivery and site handling

3.1 Delcote Coating and Seamsil Basecoat are delivered to site in airtight cans; Seamsil Sealant is delivered to site in cartridges. The system components packaging bears the Certificate holder's details, product name, hazard labels, transportation information, batch number and the BBA Logo.

3.2 The system components must be stored in well-ventilated, dry, frost-free conditions, not exposed to high temperatures and away from direct sunlight, oxidising agents and acids. Partially used containers should be tightly sealed when not in use.

3.3 The packaging sizes are given in Table 1.

Table 1 Packaging

Component name	Packaging	Unit type	Unit size	Number of units per pack
Delcote Coating	Pallet	Cans	20 kg	28 cans per pallet
Seamsil Basecoat	Box/pallet	Cans	5kg	4 per box/66 cans per pallet
Seamsil Sealant	Box/pallet	Cartridge	310 mℓ	25 per box/ 64 boxes per pallet

3.4 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 Delcote Architectural Roof Coating System.

Design Considerations

4 General

4.1 The Delcote Architectural Roof Coating System is satisfactory for the use as a protective coating against corrosion for existing galvanized steel and plastisol coated galvanized steel roofs with a maximum pitch of 70 degrees and limited access.

4.2 The system is not a waterproofing coating but will enhance water-repellent properties of the roof when applied to a suitably weathertight substrate.

4.3 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2018.

4.4 Limited access roofs are defined for the purpose of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. When pedestrian traffic is required for cleaning, special precautions, such as additional protection to the roof coating, must be taken. This product is not suitable for traffic in excess of this.

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, when used in accordance with this Certificate, will provide a roof with enhanced water-repellent properties.

6.2 The system, when encapsulating an appropriate substrate, is capable of accepting minor structural movements, enabling a roof to comply with the requirements of the national Building Regulations.

7 Properties in relation to fire

7.1 When tested to DD CEN/TS 1187 : 2012, Test 4, a system comprising a 0.75 mm polyvinyl chloride (PVC) plastisol coated steel substrate and a 0.2 mm coating of Delcote Coating, achieved a classification to BS EN 13501-5 : 2016 of $B_{ROOF}(t4)$[(1)] and so is unrestricted with respect to proximity to a boundary by the national Building Regulations.

(1) Fire test report and Fire Classification report for Delcote Coating, references Q100992-1001 and Q100992-1002 respectively, conducted by BRE Global. Reports available from the Certificate holder.

7.2 The designation of other specifications should be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

8 Protection from corrosion

8.1 The system will provide cut edge protection against corrosion to the galvanized steel substrates it is applied to from all normal atmospheric corrosive conditions, including coastal and industrial conditions (see sections 8.2 and 11.2).

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

9 Adhesion

The adhesion of the system to the substrates named in section 4.1 is satisfactory.

10 Resistance to mechanical damage

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

11 Maintenance

11.1 The system must be the subject of annual inspections and maintenance.

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

12 Durability

The system will provide a durable protective coating for galvanized steel substrates with a service life in excess of 25 years.

Installation

13 General

13.1 Application of the Delcote Architectural Roof Coating System is in accordance with the Certificate holder's instructions and this Certificate.

13.2 Galvanized steel or plastisol coated galvanized steel roofs to which the system is to be applied, must be thoroughly clean, completely dry, free from sharp projections, free from loose and flaking material (including rust) and degreased. In cases of doubt on the requirements for surface treatment, the advice of the Certificate holder should be sought.

13.3 Cleaning agents such as white spirit and detergent must not be applied prior to application.

13.4 Holes in the substrate caused by corrosion, cracks and overlaps in the substrate where bridging of the system is required are filled prior to coating using Seamsil Sealant. For all edges, Seamsil Sealant is gun-applied into the damaged area and tooled off to a smooth edge. For overlaps, Seamsil Sealant is gun-applied into the gaps between the upper and lower roof sheets, as close to the upper sheet as possible, in accordance with the Certificate holder's instructions.

13.5 Installation should not be carried out during inclement weather (eg rain, fog or snow) and when rain is expected within two to four hours depending on temperature. The system must be applied when the air and substrate temperatures are greater than 3°C, air temperatures must not exceed 38°C and the substrate temperatures must not exceed 60°C.

14 Procedure

14.1 Steel substrates are treated with Seamsil Basecoat, prior to the application of Delcote Coating, in accordance with the Certificate holder's instructions.

14.2 Installation of the system is done by applying Seamsil Basecoat by brush at a minimum wet film thickness of 220 µm before applying Delcote Coatings by brush, roller or airless spray, at a minimum wet film thickness of 154 µm. The completed system dry film thickness should be a minimum of 185 µm across the roof sheet and a minimum of 360 µm across overlaps and end laps.

14.3 When using an airless spray to install Delcote Coating, 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.

14.4 Seamsil Basecoat should be used to treat areas 25 mm from the edge of the roof sheet or either side of the overlap and a further 10 mm beyond any prepared area of corrosion.

14.5 When applying Seamsil Basecoat at overlaps, the component should be worked in a smooth upwards motion ensuring complete coverage of all exposed and prepared metal and allowed to cure.

14.6 When applying Seamsil Basecoat to edges, a coat is are applied to both the top and the underside of the sheet. The coating should extend at least 25 mm onto the underside of the roof sheet and at least 10 mm past any corrosion.

14.7 When applying Seamsil Basecoat to fixings, one coat of Seamsil Basecoat is applied to fully encapsulate the fixings. At least four hours should be allowed for the product to cure (which may vary due to weather conditions) in accordance with the Certificate holder's instructions.

14.8 Once Seamsil Basecoat is touch dry, a first coat of Delcote Coating is applied to the prepared surfaces. A criss-cross or cross-spray technique should be used to achieve a surface without runs.

14.9 Once Delcote Coating is tack free (overnight cure is recommended), a second Delcote coat is applied in a contrasting shade and allowed to fully cure.

15 Repair

The repair of minor damage to the system can be achieved by cleaning back to unweathered material and recoating the damaged area with the system in accordance with section 14.2.

Technical Investigations

16 Tests

Tests were carried out 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.

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

17.3 Data on fire performance were assessed.

Bibliography

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

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

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 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.

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.