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Agrément Certificate
15/5266
Product Sheet 1

LIQUASIL ASBESTOS ROOF COATING SYSTEM

ASBESTOSEAL 20

This Agrément Certificate Product Sheet⁽¹⁾ relates to Asbestoseal 20, a one-component, liquid-applied, silicone-based coating for use as an encapsulant with water-repellent properties on pitched asbestos 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

Encapsulation — the product provides an effective means of encapsulating asbestos roofs (see sections 4.1 and 12).

Resistance to moisture — the product is water repellent and will support water run-off from the roof (see sections 4.2 and 6).

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

Adhesion — the adhesion of the product 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 8).

Slip resistance — the product has, when wet and dry, a satisfactory coefficient of friction to provide adequate slip resistance during installation and maintenance (see section 9).

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

Durability — under normal service conditions the product will have a service life of at least 25 years (see section 12).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'John Albon'.

Date of First issue: 16 October 2015

John Albon — Head of Approvals
Construction Products

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

Claire Curtis-Thomas
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, Asbestoseal 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 product, when encapsulating asbestos roofs, will not affect a roof being unrestricted under this Requirement. See section 7 of this Certificate.
Requirement: C2(b)	Resistance to moisture
Comment:	The product, when applied to an asbestos roof, can contribute to the roof meeting this Requirement. See section 6 of this Certificate.
Regulation: 7	Materials and workmanship
Comment:	The product is acceptable. See section 12 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 product can contribute to a construction meeting this Regulation. See sections 11 and 12 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 product, 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 fire classification of the roof. See section 7 of this Certificate
Standard: 3.10	Precipitation
Comment:	The product, when encapsulating an asbestos, metal or fibre-cement roof substrates, can contribute to the roof satisfying the requirements of this Standard with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.8 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Standard: 7.1(a)(b)	Statement of sustainability
Comment:	The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation: 12	Building standards applicable to conversions
Comment:	All comments given for the product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



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

Regulation: 23(a)(b)(i)	Fitness of materials and workmanship
Comment:	The product comprises acceptable materials and satisfies the requirements of this Regulation. See section 12 and the <i>Installation</i> part of this Certificate.
Regulation: 28(b)	Resistance to moisture and weather
Comment:	The product will not have an adverse effect on a weathertight roof satisfying the requirements of this Regulation. See section 6 of this Certificate.
Regulation: 36(b)	External fire spread
Comment:	On suitable non-combustible roof substrates, the product will not have an adverse effect on a roof being unrestricted under this Regulation. See section 7 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See sections: 3 *Delivery and site handling* (3.1 and 3.3), 4 *Use* (4.4), 11 *Maintenance*, 13 *General* (13.1, 13.2) and 15 *Repair* (15.2) of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of Asbestoseal 20, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards, Part 7 Roofs, Chapter 7.2 Pitched roofs*.

Technical Specification

1 Description

1.1 Asbestoseal 20 is a one-component, liquid-applied, water-repellent silicone-based polymer coating for use in encapsulating weathered asbestos roofing.

1.2 Asbestoseal 20 is applied at a coverage of 3.2 m² per litre to achieve a dry film thickness of 250 µm, or 2.6 m² per litre to achieve a dry film thickness of 300 µm. The standard product is available in grey. All RAL colours are available upon request but the colour-retention properties are outside the scope of this Certificate.

1.3 Also for use with the product and within the scope of this Certificate is Liquasil Non Sag-Sealer, a thixotropic coating to be used on joint detail, cracks and small holes, fixings and overlaps.

1.4 Other items or components which may be used in conjunction with the product, but which are outside the scope of this Certificate, are:

- Liquasil Cut Edge & Corrosion Primer for metal roof fixings
- Asbestoseal SF, a solvent-free version of Asbestoseal 20
- optional fleece for bridging larger holes and cracks
- Asbestoseal Asbestos Cement Stabiliser, for de-laminated and porous roof surfaces
- Liquasil Glaze Protect, liquid laminate for repairing and protecting glass and GRP roof lights.

1.5 Details of suitable products and specifications may be obtained from the Certificate holder.

2 Manufacture

2.1 The product is 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 Liquasil Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by BSI (Certificate No: FM01580).

3 Delivery and site handling

3.1 Asbestoseal 20 is packed in 5 litre or 20 litre airtight containers (with a nominal weight of 1 kg per litre) bearing the Certificate holder's details, name of the product, hazard labels, transportation information, colour, expiry date and batch number.

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

3.3 The Certificate holder has taken the responsibility of classifying and labelling the product 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.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Asbestoseal 20.

Design Considerations

4 Use

4.1 Asbestoseal 20 is satisfactory for use in encapsulating weathered asbestos roof sheets on pitched roofs with limited access.

4.2 Asbestoseal 20 is not a waterproofing coating, but when applied to a suitably weathertight substrate it provides water repellency.

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. Should traffic in excess of be envisaged, special precautions, such as additional protection to the roof coating, must be taken.

4.4 Precautions must be taken before work is undertaken on fibre-reinforced asbestos roof sheets in order to avoid airborne asbestos fibres. Reference should be made to HSE *Health and safety guidance HSG 33* and HSE *Asbestos essentials A10 Cleaning debris from guttering on an asbestos cement roof, A12 Cleaning weathered asbestos cement roofing and cladding* and EM9 *Disposal of asbestos waste*.

5 Practicability of installation

The product should only be installed by installers who have been trained by the Certificate holder and who have successfully completed an asbestos awareness course. Installers must comply with the requirements of HSG 33.

6 Weathertightness



6.1 Asbestoseal 20, when used in accordance with this Certificate, will provide a roof with enhanced water-repellent properties.

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

7 Properties in relation to fire



7.1 When tested in accordance with BS 476-7 : 1997, a system comprising one layer of Asbestoseal 20 with one coat of Asbestoseal SF clear finish, applied to approximately 25 microns on a calcium silicate board (unprimed), achieved a Class 1 surface spread of flame classification.

7.2 When tested in accordance BS 476-6 : 1989, the system achieved a fire propagation index (I) of 0. Therefore, the product is classified as Class 0 or 'low risk' as defined in Appendix A of Building Regulations 2010, *Fire Safety*, Approved Document B.

7.3 In the opinion of the BBA, the application of the product will not affect the fire classification of the roof.

8 Adhesion

The adhesion of the product to the substrates given in section 4 of this Certificate is sufficient to resist the effects of any likely wind suction, elevated temperatures, thermal shock or minor movement likely to occur in practice.

9 Slip resistance

Results of tests on Asbestoseal 20 indicate that the product has satisfactory slip resistance in both dry and wet conditions.

10 Resistance to foot traffic

The product can accept light foot traffic and light concentrated loads associated with installation and maintenance. Care should be taken to avoid puncture by sharp objects or concentrated loads.

11 Maintenance



Asbestos pitched roofs encapsulated with the product must be the subject of bi-annual inspections, in autumn after leaf fall and in spring, to ensure that vegetation and other debris are cleared from the roof, and that drains remain clear and functional. All works should be carried out in accordance with HSE *Asbestos Essentials A10, A12* and EM9.

12 Durability



The system will function effectively as an encapsulating coating for a period in excess of 25 years.

Installation

13 General

13.1 Application of Asbestoseal 20 must be in accordance with the Certificate holder's instructions and this Certificate. The measures given in HSE *Asbestos Essentials A16 Painting asbestos cement sheets* should also be followed to reduce the exposure and minimise the risks associated with asbestos.

13.2 Substrates to which the product is to be applied must be thoroughly clean and completely dry and free from sharp projections. The Certificate holder's advice must be sought with regard to the suitability of the substrate to receive the product, suitable cleaning procedures and the use of a proprietary surface cleaner/fungicidal wash where required. Asbestos containing waste produced must be disposed of in accordance with HSE *Asbestos Essentials EM9* and A10.

13.3 Detailing, such as at upstands, penetrations, joints and fixings, must be carried out in accordance with the Certificate holder's instructions before proceeding with the main roof area.

13.4 Adhesion checks must be carried out to ensure that the product is compatible with the existing surfaces. The Certificate holder must be consulted for details of suitable test methods and requirements before use.

14 Procedure

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

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 suitable.

14.3 The asbestos cement roof surface must be thoroughly cleaned and allowed to dry prior to application of the product.

14.4 Any metal fixings protruding through the roof surface must be treated with a suitable anti-corrosion treatment specified by the manufacturer.

14.5 Liquasil Non-Sag Sealer is applied before application of Asbestoseal 20 on any damaged or debonded areas.

14.6 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.

14.7 Air and substrate temperatures must be in excess of -5°C .

14.8 If the product is spray-applied, 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 $6.7\text{ m}\cdot\text{s}^{-1}$ (approximately 15 mph), unless precautions such as the use of wind barriers are taken.

14.9 Work should only be commenced on an area if it can be sprayed to the full thickness before weather changes occur.

14.10 The product can be applied by airless spray, brush or roller, at a maximum application rate of 2.6 m^2 to 3.2 m^2 per litre. On rough, porous or undulating substrates a higher coverage rate will be required. In this situation the advice of the Certificate holder must be sought.

14.11 The product must be stirred before use until homogeneous, applied undiluted with a roofing brush, roller or spray, and spread evenly to avoid patches and create a smooth flawless finish.

14.12 Asbestoseal 20 is applied at a coverage rate of 3.2 m^2 per litre.

15 Repair

15.1 Minor damage can be repaired by removing the damaged material and reapplying it to the same specification.

15.2 The guidance given in HSE 33, A13 *Repairing damaged asbestos cement* should be followed as good practice to ensure adequate levels of work.

Technical Investigations

16 Tests

Tests were conducted on Asbestoseal 20 and the results assessed to determine:

- delamination strength
- water vapour permeability
- infrared analysis
- dynamic indentation
- static indent
- tensile properties
- fatigue cycling
- water resistance
- effect of day joint delamination
- slip resistance.

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 fire performance to BS 476-6 : 1989 and BS 476-7: 1997 were assessed.

17.3 Visits were made to existing sites to assess the performance of Asbestoseal 20.

Bibliography

BS 476-6 : 1989 + A1 : 2009 *Fire tests on building materials and structures — Fire propagation test for products*

Conditions of Certification

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