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Agrément Certificate

95/3146

Product Sheet 1

PPG ARCHITECTURAL COATINGS UK LIMITED PAINT SYSTEMS

JOHNSTONE'S STORMSHIELD SMOOTH AND TEXTURED MASONRY

This Agrément Certificate Product Sheet⁽¹⁾ relates to Johnstone's Stormshield Smooth and Textured Masonry, for use as interior and exterior masonry coatings.

(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

Permeability — the products are permeable to water vapour (see section 6).

Properties in relation to fire — the products are classified as Class 0 or 'low risk' as defined in the national Building Regulations and their use is restricted in some cases (see section 7).

Durability — in normal conditions, the products have good colour stability and will perform satisfactorily for more than 15 years (see section 9).



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 Eighth issue: 29 April 2019

John Albon
Chief Scientific Officer

Originally certificated on 18 July 1995

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, Johnstone's Stormshield Smooth and Textured Masonry, 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:	B2	Internal fire spread (linings)
Requirement:	B4(1)	External fire spread
Comment:		The use of the products on non-combustible substrates may enable a wall to be unrestricted by these Requirements. See sections 7.1 to 7.4 of this Certificate.
Regulation:	7	Materials and workmanship (applicable to Wales only)
Regulation:	7(1)	Materials and workmanship (applicable to England only)
Comment:		The products are acceptable. See section 9.1 and the <i>Installation</i> part of this Certificate.
Regulation:	7(2)	Materials and workmanship (applicable to England only)
Comment:		The products are restricted by this Regulation. See sections 7.1 to 7.4 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 8 and 9.1 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings
Standard:	2.7	Spread on external walls
Comment:		The products are not classified as 'non-combustible' and are therefore restricted by these Standards, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ , 2.6.6 ⁽²⁾ and 2.7.1 ⁽¹⁾⁽²⁾ . See sections 7.1, 7.2, 7.5 and 7.6 of this Certificate.
Standard:	7.1(a)	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 9.1 and the <i>Installation</i> part of this Certificate.
Regulation:	34	Internal fire spread – Linings
Regulation:	36(a)	External fire spread
Comment:		The use of the products on non-combustible substrates may enable a wall to be unrestricted by these Regulations. See sections 7.1 to 7.3 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 sections: 1 *Description* (1.3) and 3 *Delivery and site handling* (3.4) of this Certificate.

Technical Specification

1 Description

1.1 Johnstone's Stormshield Smooth and Textured Masonry are based on a resin emulsion containing pigments, extenders, biocides and other additives.

1.2 The products are available in a range of colours, largely to BS 4800 : 2011.

1.3 Ancillary items used with the products include:

- Johnstone's Performance Coatings Sterilisation Wash — used to prepare weathered surfaces showing signs of organic growth. The product is approved for this use under the *Control of Pesticides (Amendment) Regulations 1997* (HSE No. 7359)
- Johnstone's Stormshield Stabilising Solution — used to stabilise friable or chalking surfaces.

2 Manufacture

2.1 The products are manufactured by mixing resin and solvents with pigments and additives in 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 being operated by the manufacturer are being maintained.

2.3 The management systems of PPG Architectural Coatings UK Limited have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 and BS EN ISO 14001 : 2004 by BSI (Certificates FMO 1265 and EMS 73683 respectively).

3 Delivery and site handling

3.1 The products are supplied in 5 litre containers bearing the Certificate holder's name, date code, and the BBA logo incorporating the number of this Certificate.

3.2 The products should be protected from frost during transit and when stored on site.

3.3 The products have a shelf-life of two years. Degradation of the materials does not occur but there may be some settling. Partly used containers can be re-stored provided they are airtight.

3.4 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 Johnstone's Stormshield Smooth and Textured Masonry.

Design Considerations

4 Use

4.1 Johnstone's Stormshield Smooth and Textured Masonry are satisfactory for use as masonry coatings in interior and exterior applications.

4.2 The products are satisfactory for application by roller, brush or spray to surfaces of the following substrates:

- (a) in-situ or precast concrete (dense and lightweight)
- (b) concrete blockwork (dense and lightweight)
- (c) brickwork (stock, facing and calcium silicate bricks)⁽¹⁾
- (d) renderings (sand/cement and sand/lime/cement)
- (e) calcium silicate or fibre-reinforced cement sheets or insulation boards
- (f) surfaces (d) and (e) treated with Johnstone's Stormshield Stabilising Solution
- (g) surfaces painted with gloss, oil or emulsion paints.

(1) In new construction, the brick manufacturer's recommendations for overcoating materials must be followed.

4.3 The scope of this Certificate includes the face of the wall above damp-proof course (dpc) level, and excludes horizontal surfaces such as ledges, sills and copings. Parapet walls must have effective dpc's in the correct positions.

4.4 The effect of pre-treatments or an existing coating on the surface's fire properties is defined in section 7.

5 Practicability of installation

The products are designed to be applied by operatives familiar with these types of products.

6 Permeability

6.1 When tested to BS EN ISO 7783 : 2011, samples of Johnstone's Stormshield Smooth Masonry achieved an Sd value of 1.12 m and classifies the coating as V₂ (Medium) for water vapour transmission rate in accordance to BS EN 1062-1 : 2004, Table 4.

6.2 When tested by dynamic sweep gas to BS 7406 : 1991 (ISO 9932 : 1990), samples of Johnstone's Stormshield Textured Masonry applied on fibre-reinforced cement board, gave water vapour resistance of 3.17 MN·s⁻¹·g⁻¹.

6.3 The coatings tend to shed water and considerably reduce the amount of water that can be absorbed by the substrate during rain.

6.4 When classified to BS EN 1062-1, the white Johnstone's Stormshield Smooth Masonry and red Johnstone's Smooth Masonry are Class C₁ as the diffusion equivalent air layer thickness in each case exceeds 50 metres. These results satisfy the carbon dioxide permeability requirement of BS EN 1504-2 : 2004, Table 5.

7 Properties in relation to fire



7.1 A sample of white Johnstone's Stormshield Smooth Masonry on a 9 mm calcium silicate substrate, gave a fire propagation index (I) of 0.0 and a sub-index (i1) of 0.0 when tested to BS 476-6 : 1989⁽¹⁾, and a Class 1 result when tested to BS 476-7 : 1997⁽²⁾. This material combination is therefore a Class 0/'low risk' surface as defined in the national Building Regulations.

(1) Report Q100452-1002 BRE Global available from the Certificate holder.

(2) Report Q100452-1003 BRE Global available from the Certificate holder.

7.2 A sample of red Johnstone's Stormshield Smooth Masonry on 9 mm calcium silicate substrate, gave a fire propagation index (I) of 0.0 and a sub-index (i1) of 0.0 when tested to BS 476-6 : 1989⁽¹⁾, and a Class 1 result when tested to BS 476-7 : 1997⁽²⁾. This material combination is therefore a Class 0/'low risk' surface as described in the national Building Regulations.

(1) Report Q100452-1000 BRE Global available from the Certificate holder.

(2) Report Q100452-1001 BRE Global available from the Certificate holder.



7.3 In England, Wales and Northern Ireland, the products are not classified as non-combustible or of limited combustibility and may be used on buildings at any proximity to a boundary. For buildings with a storey more than 18 m above the ground, designers should consider the impact on the risk of fire spread over the wall.



7.4 The products should not be used on buildings in England that have a storey at least 18 m above ground level and contain; one or more dwellings, an institution, a room for residential purposes (excluding any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.



7.5 The products are classified 'Low Risk' in Scotland and may be used on buildings more than 1 m from a boundary and, on houses, 1 m or less from a boundary. With minor exceptions, the panels should be included in calculations of unprotected area, except on houses where the external wall behind has the appropriate fire resistance.

7.6 In Scotland, the products should not be used on domestic high-rise buildings (ie a storey more than 18 m above the ground).

7.7 This performance may not be achieved by other colours of the products, nor if they are applied over other previous coatings. The designations of other colours or substrate combinations should be confirmed by test or assessment by a UKAS-accredited laboratory.

8 Maintenance



8.1 The coatings will withstand frequent washing without deterioration. A soft bristle brush should be used.

8.2 For re-coating, it is normally neither necessary nor possible to remove the existing coating completely. The surface should be prepared by washing or brushing, and may be re-coated with Johnstone's Stormshield Smooth and Textured Masonry. The products should not be overcoated with solvent-borne gloss, oil or cement paints.

9 Durability



9.1 In normal conditions, two coats of Johnstone's Stormshield Smooth and Textured Masonry, properly applied to the substrates listed in section 4, will have good colour stability and will perform satisfactorily for more than 15 years.

9.2 In industrial atmospheres the coatings may become dirty and, to maintain their appearance, more frequent cleaning or re-coating may be necessary.

9.3 There will be a gradual change in colour which will not be excessive, but the coatings will be discoloured by water runs, and care must be taken to ensure that the normal architectural details for shedding water clear of the building are present and functioning.

9.4 The coatings may be abraded, particularly at ground-floor level, by carelessness in use, eg if bicycles or gardening tools are repeatedly leant against them.

10 General

Application of Johnstone's Stormshield Smooth and Textured Masonry should be carried out in accordance with the relevant clauses of BS 6150 : 2006 and BS 8000-12 : 1989.

11 Preparation

11.1 The substrates listed in section 4 must be sound, free from dirt and grease and reasonably dry. Joints in new brickwork and blockwork should be finished flush, and mortar joints in existing work repointed if necessary and allowed to cure.

11.2 The products can bridge hairline cracks in the substrate but larger cracks should be filled and patched in accordance with the Certificate holder's instructions.

11.3 Any organic growth should be removed mechanically from old surfaces, and Johnstone's Performance Coating Sterilisation Wash applied in accordance with the Certificate holder's instructions, left overnight, rinsed with clean water and allowed to dry. Any remaining loose material should be removed using a stiff brush.

11.4 If the substrate is chalking, absorbent or friable, or has been decorated previously, any loose material should be removed with a stiff brush. A priming coat of Johnstone's Stormshield Stabilising Solution should be applied and allowed to dry overnight before the products are applied.

12 Application

12.1 The products are applied by roller or brush in two coats and can also be spray applied. The products may be diluted with 10% water for spray application. The Certificate holder can advise on suitable types of spray equipment.

12.2 The products should not be applied in wet weather, at temperatures below 3°C, or when frost is expected. Freshly-coated work must be protected from rain for at least 30 minutes, by which time the coating will have developed some tolerance to showers.

12.3 The coverage achieved will depend on the product chosen, the method of application and the texture and suction of the substrate; normally it will be approximately 10 m² per litre per coat for the smooth product and between 6 and 8 m² per litre per coat for the textured finish.

12.4 To avoid patchiness owing to drying edges, work should be carried to an internal or external angle or to a feature. Alternatively, joints may be made to coincide with downpipes etc. On large unbroken areas, sufficient operatives should be available to maintain a flowing edge.

12.5 The drying time varies, depending on the substrate and atmospheric conditions. In favourable conditions, two coats can be applied on the same day.

Technical Investigations

13 Tests

13.1 Samples of the products were tested and the results assessed to determine:

- resistance to artificial weathering
- water vapour permeability
- effect of water immersion
- effect of alkali immersion
- resistance to impact
- resistance to abrasion
- extensibility
- adhesion to substrate.

13.2 An evaluation was made of existing data in relation to:

- resistance to algal growth
- surface spread of flame
- fire propagation.

14 Investigations

14.1 A visit was made to an in-store tinting facility to assess the operation of the system.

14.2 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.

Bibliography

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

BS 476-7 : 1997 *Fire tests on building materials and structures — Method of test to determine the classification of the surface spread of flame of products*

BS 4800 : 2011 *Schedule of paint colours for building purposes*

BS 6150 : 2006 +A1 : 2014 *Painting of buildings — Code of practice*

BS 7406 : 1991, ISO 9932 : 1990 *Methods for determination of water vapour transmission rate of sheet materials (paper and board) by dynamic sweep and static gas methods*

BS 8000-12 : 1989 *Workmanship on building sites — Code of practice for decorative wallcoverings and painting*

BS EN 1504-2 : 2004 *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Surface protection systems for concrete*

BS EN 1062-1 : 2004 *Paints and varnishes. Coating materials and coating systems for exterior masonry and concrete. Classification*

BS EN ISO 7783 : 2011 *Paints and varnishes — Determination of water-vapour transmission properties — Cup method*

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

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

15 Conditions

15.1 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.

15.2 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.

15.3 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.

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

15.5 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.

15.6 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.