

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

## Monolith - BrickPlus & StonePlus

### Description of Product

This is an assessment of BrickPlus & StonePlus which can be defined as a multi-component external wall insulation and finishing system, consisting of one or more layers and/or formed components of rigid thermal insulation (EPS, PU or other) in combination with limestone brick slips (BrickPlus™) and/or window cills, door surrounds and decorative ornaments consisting of EPS core coated with limestone (StonePlus™).



### Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention
- Durability serviceability and identification

### Validity

This certificate was first issued on 15<sup>th</sup> December 2014 and is valid until 15<sup>th</sup> December 2018

Issue Dated 14<sup>th</sup> December 2015

## Scope of Registration

The assessment of BrickPlus™/StonePlus™ relates to the use of the product for new and retrofit buildings such as dwellings and buildings with similar temperature and humidity conditions with either correctly installed masonry or natural stone cladding and lining on external cavity or solid walls, which have been designed and constructed in accordance with, but not limited to, the relevant clauses of BS 56282 and BS 82983 or any other structurally sound substrates of walls. Only those wall types are allowed where the BrickPlus™ and StonePlus™ systems are installed with the appropriate adhesive on the following substrates:

- CP board (cement particle board)
- Natural stone
- Concrete
- Masonry
- ICF (EPS)

The components should be attached to the substrate by applying the appropriate adhesive, as provided by Monolith; Installation above ground level will require mechanical fixings which are provided/(or specified) by Monolith.

BrickPlus™/StonePlus™ shall not be exposed to organic solvents or plasticisers.

The thermal resistance of BrickPlus™ panels (nominal thickness 45/110 mm) has been determined as:

- 35 mm white EPS : 1.14 m<sup>2</sup>.K.W-1
- 35 mm black EPS : 1.22 m<sup>2</sup>.K.W-1
- 97 mm white EPS : 3.09 m<sup>2</sup>.K.W-1
- 97 mm black EPS : 3.22 m<sup>2</sup>.K.W-1

The reaction to fire classification has been determined as Euroclass B – s1, d0 (BS EN 13501-1) the system does not prejudice the fire-resistance properties of the wall. Therefore, the insulation components of the system will not contribute to the development stages of a fire or present a smoke or toxic hazard.

For Scotland purposes this Registered Detail covers only the system which comprises:

Metric Brickslip

Expanded polystyrene (Kay Meltzer EPS 200)

Polyurethane adhesive (Tensopur P105) or Cement based polymer enhanced adhesive (TDS Easi-Flex)

Insulation (EPS or insulation with Reaction to fire class E or better)

Fixings (Subject to site specific testing)

Associated Stoneplus decorative elements

## Conditions of Certificate

The products should be installed as per the BDA Agrément Certificate BAW 14-025/03/A.

Where BrickPlus is installed onto an existing external wall, it should be suitably protected from the effects of the weather, at its head.

Where BrickPlus is installed against a new or existing wall which contains a damp proof course and / or cavity weepholes, provisions should be installed to ensure that their integrity continues through to the outer face of the BrickPlus.

For LABC Warranty purposes:

Suitable for retrofit / refurbishment projects only as per the scope of the assessment carried out in the BDA certificate 14-025/03/A. The existing walls must be in good condition and be thick enough on their own merit to be able to resist weather ingress as detailed in BS 5628 & BS 8298.

Where used in conjunction with an ICF structure, that;

- Monolith remains a member of the ICF Association and apply ICF Association good practice procedures in specification and construction.
- Brick Plus and Stone Plus systems are fixed directly to the ICF structure only using adhesives or renders that have been specifically approved by LABC Warranty.

For Scotland purposes:

Specification of fixings to accommodate wind suction shall be subject to site specific testing and assessment

Those site-specific elements not included in the elements specified here and not included in the supporting drawings, specifications and supporting literature are outwith the scope of this Registered Detail.

That the products used as components of the system shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the certificate holder's instructions and fully in accordance with the accredited certification and supporting test reports.

That this Registered Detail is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 1.1, 2.1, 2.2, 2.3, 2.4, 2.6, 2.7, 2.9, 3.10, 3.15, 4.1, 4.3, 6.1, 6.2 and 7.0 of the Building (Scotland) Regulations 2004 when read with the accompanying certificates and associated test reports.

The systems are non-load bearing. Systems are adhered to substrate with adhesive. Mechanical Fixings are required to resist wind suction. As a minimum, it is essential that a detailed specification document is provided for the existing wall construction onto which the EWI will be installed.

A Standard Detail Book (fully relevant to the existing wall construction) should be provided. The Detail Book should show ALL detailing to a large scale (1:20 or equivalent) and should have regards to: -

- Windows and doors – cill / head / ingoes
- Service ducting – pipes, boiler flues, overflows etc
- Wall section,
- DPC level detailing
- Cavity barriers,
- Wall/soffit junction,
- Junctions at separating walls/floors
- Project specific detailing

BBA Certificates or other UKAS Accredited Test House certification (product/installation) and BBA Certification of fixings appropriate to the wall type should be provided. For clarity, a detailed fixings schedule and details of any expansion joints should accompany any submission together with a site-specific specification of the pull-off/ pull-out load/testing regime with or without SER Certification. The designer should specify the fixing type, density of fixings, additional requirements at edges (such as doors and windows), any required in-situ testing regime and the design pull-out value per fixing.

It is not expected that an SER Certification should be necessary for wall types other than those over 18 metres high provided the competency criteria for the designers and installers is confirmed in writing.

That the specifications and materials referred to have been assessed in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from 1 October 2013.

That where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this Registered Detail.

That the materials specified shall be for purposes of this Registered Detail and should not be changed without first gaining approval so to do from Local Authority Building Standards Scotland [LABSS]. Failure to do so will invalidate the Registered Detail.

That the Registered Detail shall be valid for a period of 12 months from the date of issue or until otherwise invalidated by formal notice by LABSS. The Registered Detail may be re-validated after 12 months following a request and payment of an annual renewal fee from the Registered Detail Holder.

This Registered Detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005

That this Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the scope, conditions and regulations sections to this Registered Detail.

LABC and LABSS consider that, BrickPlus & StonePlus, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;



## The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and Workmanship
Note:	The products are acceptable.
AD A	Structure
Note:	The products are acceptable
AD B	Fire safety
Note:	The products are acceptable
AD C	Site preparation and resistance to contaminants and moisture
Note:	The products are acceptable
AD L1B	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the roof structure.
Regulation 7	Materials and workmanship
Note:	The products are acceptable



## The Building Regulations 2010 (as amended) England

AD L1A	Conservation of fuel & power
Note:	The products should be used in conjunction with other insulation materials to achieve the required thermal properties.



## The Building Regulations 2010 (as amended) Wales

AD L1A	Conservation of fuel & power
Note:	The products should be used in conjunction with other insulation materials to achieve the required thermal properties.



## The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks Domestic and Non-Domestic

Regulation 8	Durability, workmanship and fitness of materials
0.8.5:	Ways of establishing the fitness of materials
Regulation 9	Building Standards applicable to construction
	Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

Mandatory	
Standard 1.1(a)	Structure
1.1.1	General
1.1.2	Loading
1.1.3	Design and construction
Note:	<p>Certification Documents for ALL "high rise" (over 18m) - a detailed fixings schedule should accompany any submission and a pull-out load/testing regime should be specified irrespective of SER Certification to confirm:</p> <ul style="list-style-type: none"> <li>• BDA or ETA Certificate compliance;</li> <li>• Pull out test results (each wall type);</li> <li>• Detail types of fixings;</li> <li>• Detail expansion joints</li> <li>• SER Certification supported by a fully detailed engineering specification as detailed under the specification and certification documents above is recommended.</li> <li>• An engineered approach is required for these installations, including wind load calculations. In addition, there is a need for a chartered engineer or other appropriately qualified person to carry out a structural assessment of the building to which this system is to be applied.</li> </ul>
Note:	<p>For "All Other" external wall types certification and documentation should be as above except:-</p> <ul style="list-style-type: none"> <li>• It is not expected that SER Certification should be necessary for these other wall types provided the competency criteria for the designers and installers meet the requirements of the relevant BDA or ETA Certificate.</li> <li>• An engineered approach is required for these installations, including wind load calculations. In addition, there is a need for an appropriately qualified person to carry out a structural assessment of the building to which this system is to be applied.</li> </ul>
Mandatory	
Standard 2.1	Compartmentation
2.1.15	Junctions
Mandatory	
Standard 2.2	Separation
2.2.7	Junctions
Mandatory	
Standard 2.3	Structural protection
2.3.1	Elements of structure
2.3.5	Junctions
Mandatory	
Standard 2.9	Means of escape
2.9.24	Protected zones
2.9.28	Junctions
Note:	<p>In both fully adhered and timber/ steel frame systems cognisance should be taken of the maintenance of fire resistant integrity at all parating/compartment</p>

wall/floor junctions and at protected zones around escape routes within buildings to meet the above standards.

Mandatory

Standard 2.4

Cavity barriers

2.4.1

Cavity barriers

Note:

This certificate covers the use in a fully adhered system and in timber/ steel frame system. Where used in a fully adhered system no cavity will be created between the wall substrate and the cladding. Mandatory Standard 2.4: Cavity Barriers would apply only in the event of a physical cavity being created. In a timber/ steel frame system a cavity will be required and cavity barriers will be required in accordance with Mandatory Standard 2.4.

Mandatory

Standard 2.6

Spread to neighbouring buildings (Domestic)

2.6.1

Fire resistance of external walls

2.6.2

Unprotected area

Mandatory

Standard 2.7

External Cladding

Note:

This system has achieved a classification of B-s1, d0 when tested in accordance with Classification of Reaction to Fire Performance BS EN 13501-1:2007+A1 2009 (reference Annex 2.B reaction to fire). Note the testing of the system was carried out with an EPS with a fire class any alternative insulation should achieve at least the performance of this class. The compliance of the building with the requirements of Mandatory Standard 2.6: Spread to Neighbouring Buildings and Mandatory Standard 2.7: External Cladding should be assessed.

Reference should be made to the BSD guidance document for houses up to 2 storeys and the 2015 Domestic Technical Handbook.

Mandatory

Standard 3.10

Precipitation

3.10.3

Wall constructions (cavity, masonry)

Note:

This system will contribute to compliance of the building with the requirements of Mandatory Standard 3.10. Where this system is utilised in conjunction with timber/ steel frame the product is adhered onto a substrate CP board and a cavity is created between the frame and substrate board. This cavity should be 50mm min and be ventilated in accordance with the guidance to 3.10.6 ventilation of wall cavities.

Mandatory

Standard 6.1(b)

Carbon dioxide emissions

6.1.1:

Dwellings/SBEM

6.1.2:

Setting the target carbon dioxide emissions level

6.1.4

Fabric and fixed building services specification for 'notional' building

### Mandatory

#### Standard 6.2

Building insulation envelope

#### 6.2.1:

Maximum u-values for new buildings

#### 6.2.3:

Limiting heat loss through thermal bridging (Domestic)

#### 6.2.5:

Limiting heat loss through thermal bridging (Non Domestic)

#### Note:

Alterations: (upgrade of existing domestic and non-domestic buildings)

Site-specific assessment of u-value relative to insulation will be required

#### Note:

Conversions and new build:

This system will contribute to a building achieving compliance with Mandatory Standard 6.1: Carbon Dioxide Emissions and Mandatory Standard 6.2: Building Insulation Envelope where full compliance is required.



## Non-Regulatory Information



### LABC Warranty

LABC Warranty conditionally accepts the use of Monolith BrickPlus and StonePlus, when installed and used in accordance with the Scope and Conditions of this Certificate. Visit [www.labcwarranty.co.uk](http://www.labcwarranty.co.uk) for our LABC Warranty Technical Manual requirements and Warranty conditions of acceptance.

## Supporting Documentation

BDA Guideline – BDA Agrément®, 12th December 2013

BS 5628 Component 3:2005 Code of practice for the use of masonry: materials and components, design and workmanship BS

8298 Component 1:2010 Code of practice for the design and installation of natural stone cladding and lining. General

BS EN 12667:2001 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Products of high and medium thermal resistance

ETAG 004:2011 – Guideline for European Technical Approval of external thermal insulation composite systems with rendering

BS 5250:2011 Code of practice for control of condensation in buildings

BS EN ISO 6946:2007 Building components and building elements. Thermal resistance and thermal transmittance. Calculation method

BR443: Conventions for U-value calculations, 2006 edition, BRE Scotland

BDA Report 0237-C-12/9 BrickPlusTM/StonePlusTM: Determination of tensile strength perpendicular to faces, 2013.09.05

BDA Report 0237-C-12/1 BrickPlusTM/StonePlusTM: Thermal shock test, 2013.06.24

BDA Report 0237-C-12/2 BrickPlusTM/StonePlusTM: Resistance to dynamic wind forces, 2013.06.24

BDA Report 0237-C-12/4 BrickPlusTM/StonePlusTM: Impact resistance, 2013.06.24

BDA Report 0237-C-12/10 BrickPlusTM/StonePlusTM: Determination of thermal resistance, 2013.08.01

BDA Report 0237-C-12/7 BrickPlusTM/StonePlusTM: Determination of ignitability, 2013.06.26

BDA Report 0237-C-12/8 BrickPlusTM/StonePlusTM: Classification using test data from reaction to fire, 2013.06.26

BDA report 11-G-0157 BrickPlusTM/StonePlusTM: Inspection visits to workshop and projects, 2013.07.17

Warrington Exova Report CR335685

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Exova Warrington Fire report no 335685 Reaction to fire classification –BS EN 13501- 1:2007+A1:2009

Exova Warrington Fire report no 335384 Reaction to fire tests - BS EN 13823: 2010

Exova Warrington Fire report no 342110 Ignitability tests - BS EN ISO 11924-2: 2010

BDA Agrément BAW 14-025/03/A

BDA Agrément BAW 13-028/01/A

BDA Report 0237-C-12/9 BrickPlusTM/StonePlusTM: Determination of tensile strength perpendicular to faces, 2013.09.05

BDA Report 0237-C-12/1 BrickPlusTM/StonePlusTM: Thermal shock test, 2013.06.24

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Monolith Technical Reference & Fitting Guide

Standards detail sheets

Example u-value

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