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BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
09/4622
Product Sheet 1

MONIER FLASHINGS

RAPID FLASHING

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Rapid Flashing, for use on chimneys and side abutment details on pitched roofs in conjunction with the Redland range of tiles and slates, excluding Natural Slate, as an alternative to lead flashing.

AGRÉMENT 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 – as part of a complete roof, the product will contribute to resisting the passage of moisture into the interior of the building (see section 5).

Properties in relation to fire – data indicate that the product when used as part of a complete roof will be unrestricted under the Building Regulations (see section 6).

Strength – the product has adequate strength to resist the loads associated with the installation of the roof (see section 7).

Durability – under normal service conditions, the product will have an expected service life in excess of 20 years (see section 9).

The BBA has awarded this Agrément 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

Date of First issue: 30 January 2009

Simon Wroe
Head of Approvals — Materials

Greg Cooper
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, Rapid Flashing, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:

The Building Regulations 2000 (as amended) (England and Wales)

Requirement:	B4(2)	External fire spread
Comment:		Data to DIN 4102-1 : 1998 indicate that the product when used as part of a complete roof, will not effect the fire rating of the roof construction. See section 6 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The product will contribute to a roof meeting this Requirement. See section 5 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is acceptable. See section 9 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See sections 8 and 9 and the *Installation* part of this Certificate.
Regulation:	9	Building standards — construction
Standard:	2.8	Spread from neighbouring buildings
Comment:		Data to DIN 4102-1 : 1998 indicates that the product can be regarded as having a low vulnerability, with reference to clause 2.8.1[(1)(2)], and will not effect the fire rating of the roof construction. See section 6 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product will contribute to a roof satisfying clauses 3.10.1[(1)(2)] and 3.10.8[(1)(2)] of this Standard. See section 5 of this Certificate.
Regulation:	12	Building standards — conversions
Comment:		All comments given for these products under Regulation 9, 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) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 9 and the *Installation* part of this Certificate.
Regulation:	B3(2)	Suitability of certain materials
Comment:		The product is acceptable. See section 8 of this Certificate.
Regulation:	C4(b)	Resistance to ground moisture and weather
Comment:		The product will contribute to a roof satisfying this Regulation. See section 5 of this Certificate.
Regulation:	E5(b)	External fire spread
Comment:		Data to DIN 4102-1 : 1998 indicate that the product when used as part of a complete roof construction will not effect the fire rating of the roof construction. See section 6 of this Certificate.

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

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

See section: 1 *Description* (1.2).

Non-regulatory Information

NHBC Standards 2008

NHBC accepts the use of Rapid Flashing, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapters 6.8 *Fireplaces, chimneys and flues*, and 7.2 *Pitched roofs*.

Zurich Building Guarantee Technical Manual 2007

In the opinion of the BBA, Rapid Flashing, when installed and used in accordance with this Certificate, satisfies the requirements of the *Zurich Building Guarantee Technical Manual*, Section 4 *Superstructure*, Sub-sections *External walls – chimneys, External walls – parapets* and *Pitched roofs*.

General

This Certificate relates to Rapid Flashing, for use as an alternative flashing material to traditional lead flashing to provide a weatherproof junction on chimneys and side abutment details on pitched roofs in conjunction with the Redland range of tiles and slates, excluding Natural Slate.

Technical Specification

1 Description

1.1 Rapid Flashing is manufactured by an extrusion/lamination process of layers of polyisobutylene and additives reinforced with an aluminium rib mesh insert. The lower surface has a layer of adhesive protected with a release foil layer. Butyl stripes are applied on both sides along the width of the finished product for adhering to roof tiles/slates.

1.2 The rolls are available with the nominal characteristics of:

Thickness (mm)	2
Roll width (mm)	280 and 370
Length (m)	5 and 10
Weight of roll/box (kgm^{-2})	10 and 7
Colour	lead grey

1.3 Quality control checks are carried out on incoming materials, during production and on final product, including:

- dimensions
- tearing strength
- water absorption
- peel strength.

2 Delivery and site handling

2.1 The product is packed in white cardboard boxes, marked with the size, colour, product name, number of rolls per box and the BBA identification mark including the number of this Certificate.

2.2 The product should be stored upright on smooth, clean, dry surface, under cover and protected from sunlight.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Rapid Flashing.

Design Considerations

3 General

3.1 Rapid Flashing, when designed and installed in accordance with the relevant parts of BS 5534 : 2003 and BS 8000-6 : 1990 is suitable for use on chimneys and side abutment details to provide a weatherproof finish in conjunction with the Redland range of tiles and slates, excluding Natural Slate.

3.2 The product should not be used on pitched roofs where the Redland Top Edge Abutment Ventilation System has been installed as it is designed to be held in place by lead flashing.

4 Practicability of installation

The material can be installed readily by competent roofing slaters and tilers.

5 Weathertightness

Tests confirm that Rapid Flashing, when incorporated into a roofing system designed and installed in accordance with conventional good practice will adequately resist the passage of moisture to the interior of the building and so contribute to the roof meeting the requirements of the national Building Regulations:

England and Wales —Approved Document C, Requirement C2(b), Section 6

Scotland — Mandatory Standard 3.10, clauses 3.10.1[(1)(2)] and 3.10.8[(1)(2)]

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — Regulation C4(b).

6 Properties in relation to fire

Samples of Rapid Flashing, when tested in accordance with DIN 4102-1 : 1998 achieved a B2 classification for surface spread of flame. Interpretation of this classification indicates that the product will not effect the performance of the roof.

7 Strength

The product will resist the normal impacts associated with installation and use.

8 Maintenance

Damaged areas can be repaired by following the Certificate holder's instructions.

9 Durability

The product has an expected service life in excess of 20 years.

Installation

10 General

10.1 Installation of Rapid Flashing should be strictly in accordance with the Certificate holder's instructions and the relevant recommendations of BS 5534 : 2003 and BS 8000-6 : 1990.

10.2 The product is worked in the same way as lead flashing. It can be cut with a sharp knife, scissors or snips. In respect of health, protective gloves should be worn during installation.

10.3 Cutting, folding and working with a lead dresser can be carried out to a minimum temperature of 5°C.

Technical Investigations

11 Tests

Samples of Rapid Flashing were obtained from the Certificate holder for testing. The results of the tests carried out by, or on behalf of the BBA are summarised in Tables 1 and 2.

Table 1 Physical properties — directional

Test (units)	Mean result		Method[1]
	Longitudinal	Tranverse	
Tensile strength (N per 50mm)			BS EN 12311-1
unaged	195	–	
aged[2]	200	–	
aged[3]	205	–	
Elongation at break (%)			BS EN 12311-1
unaged	58	–	
aged[2]	64	–	
aged[3]	65	–	
Tear resistance (nail) (N)			BS EN 12310-1
unaged	200	197	
Low temperature foldability (°C)			BS EN 495-5
unaged – upper and lower surface	–40	–40	
aged[3] – upper and lower surface	–40	–40	

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

(2) UVB aged 2000 total hours UVB: 4 hours UVB 313 at 50 ± 2°C, followed by 4 hours condensation at 50 ± 2°C.

(3) 12 weeks at 80°C.

Table 2 Physical properties — general

Test (units)	Mean result	Method[1]
Ash content (%)	51.9	MOAT 64
Dimensional stability (%)	0	BS EN 1107-1
Water vapour transmission ($gm^{-2}day^{-1}$)	0.010	BS 3177
Water vapour resistance ($MNsg^{-1}$)	23119	BS 3177
Water absorption (%)	0.1	MOAT 66
Peel strength — Max load (N)		MOAT 64
unaged		
clay tile	25	
concrete tile	30	
aged[2]		
clay tile	30	
concrete tile	61	

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

(2) 28 days at 80°C.

12 Investigations

12.1 An assessment was made of results of a fire test in accordance with DIN 4102-1 : 1998 carried out by an independent test authority.

12.2 The manufacturing process was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials.

Bibliography

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*

BS 5534 : 2003 *Code of practice for slating and tiling (including shingles)*

BS 8000-6 : 1990 *Workmanship on building sites — Code of practice for slating and tiling of roofs and claddings*

BS EN 495-5 : 2001 *Flexible sheets for waterproofing — Determination of foldability at low temperature — Plastic and rubbers sheets for roof waterproofing*

BS EN 1107-1 : 2000 *Flexible sheets for waterproofing — Determination of dimension stability — Bitumen sheets for roof waterproofing*

BS EN 12310-1 : 2000 *Flexible sheets for waterproofing — Determination of resistance to tearing (nail shank)— Part 1 — Bitumen sheets for roof waterproofing*

BS EN 12311-1 : 2000 *Flexible sheets for waterproofing — Determination of tensile properties — Part 1 — Bitumen sheets for roof waterproofing*

DIN 4102-1 : 1998 *Fire behaviour of building materials and building components; Building materials; concepts, requirements and tests*

MOAT No 64 : 2001 *UEAtc Technical Guide for the assessment of Roof Waterproofing Systems made of Reinforced APP or SBS Polymer Modified Bitumen Sheets*

MOAT No 66 : 2001 *UEAtc Technical Guide for the assessment of non-reinforced, reinforced and/or Backed Roof Waterproofing Systems made of EPDM*

13 Conditions

13.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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.

13.2 References in this Certificate to any Act of Parliament, Statutory Instrument, Directive or Regulation of the European Union, British, European or International Standard, Code of Practice, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

13.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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.

13.4 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

13.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date 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. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.

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