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Agrément Certificate

09/4685

Product Sheet 1

ICOPAL FLASHINGS

FORMFLASH – LEAD FREE WATERPROOF FLASHING

This Agrément Certificate Product Sheet⁽¹⁾ relates to FORMFLASH - Lead Free Waterproof Flashing, a reinforced bitumen-based composite material for use as waterproofing in cover flashing applications on flat and pitched roofs of new or existing domestic and non-domestic buildings as an alternative to lead flashing.

(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 — as part of a complete roof, the product will contribute to resisting the passage of moisture and wind-blown snow and dust into the interior of a building (see section 6).

Properties in relation to fire — the product will achieve an AA classification to BS 476-3 : 2004. The Certificate holder has not declared a reaction to fire classification for the product to BS EN 13501-1 : 2018 (see section 7).

Strength — the product has adequate strength to resist the loads associated with the installation of the roof (see section 8).

Durability — under normal service conditions, the product will have a service life in excess of 20 years (see section 10).

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

Date of Fourth issue: 3 October 2022

Hardy Giesler
Chief Executive Officer

Originally certificated on 7 September 2009

This Certificate was amended on 22 May 2024 as part of a transition of The BBA Agrément Certificate scheme delivered under the BBA's ISO/IEC 17020 accreditation. This Certificate was issued originally under accreditation to ISO/IEC 17065. Sections marked with the symbol † are not issued under accreditation. Full conversion to the ISO/IEC 17020 format will take place at the next Certificate review. The BBA is a UKAS accredited Inspection Body (No.4345). Readers MUST check the validity of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly. Any photographs are for illustrative purposes only, do not constitute advice and must not be relied upon.

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Regulations

In the opinion of the BBA, FORMFLASH - Lead Free Waterproof Flashing, 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(1)	External fire spread The product is restricted by this Requirement. See sections 7.3 and 7.4 of this Certificate
Requirement:	B4(2)	External fire spread The product is unrestricted by this Requirement. See sections 7.1 and 7.2 of this Certificate.
Requirement:	C2(b)	Resistance to moisture The product will contribute to a roof satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	7(2)	Materials and workmanship The product is restricted by this Regulation. See sections 7.3 and 7.4 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship The product can contribute to a roof satisfying the requirements of this Regulation. See sections 9 and 10 and the <i>Installation</i> part of this Certificate.
Regulation:	8(3)	Fitness and durability of materials and workmanship The product is restricted by this Regulation. See sections 7.3, 7.5 and 7.6 of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	2.6	Spread to neighbouring buildings The product is restricted by this Standard, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See sections 7.3, 7.5 and 7.6 of this Certificate.
Standard:	2.7	Spread on external walls The product is restricted by this Standard, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See sections 7.3, 7.5 and 7.6 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings The product is unrestricted by this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ of this Standard. See sections 7.1 and 7.2 of this Certificate.
Standard:	3.10	Precipitation The product will contribute to a roof satisfying clauses 3.10.1 ⁽¹⁾⁽²⁾ , 3.10.7 ⁽¹⁾⁽²⁾ and 3.10.8 ⁽¹⁾⁽²⁾ of this Standard. See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability 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:	Comments in relation to 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(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The product will contribute to a roof satisfying this Regulation. See section 6 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The product is restricted by this Regulation. See sections 7.3 and 7.4 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		The product is unrestricted by this Regulation. 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* (1.2) and 11 *General* (11.2) of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, FORMFLASH - Lead Free Waterproof Flashing, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 6.8 *Fireplaces, chimneys and flues*, 7.1 *Flat roofs, terraces and balconies* and 7.2 *Pitched roofs*.

Technical Specification

1 Description

1.1 FORMFLASH - Lead Free Waterproof Flashing comprises an aluminium mesh reinforcement coated with a mixture of elastomeric bitumen and additives. The lower surface is finished with a thermofusible film to protect the rolls during storage and the upper surface has a fine grey granule finish.

1.2 The rolls are available with the nominal characteristics of:

Roll length (m)	5
Roll widths (mm)	120, 150, 200, 250, 300, 450, 650 and 950
Mass per unit area (kg·m ⁻²)	4.75
Colour	grey.

1.3 The Certificate holder recommends the following ancillary items for use with the product, but these materials have not been assessed by the BBA and are outside the scope of this Certificate.

:

- Icopal Bitumen Sealant — for use in pointing chases after securing FORMFLASH – Lead Free Waterproof Flashing with FormFlash Fixing Clips
- FormFlash Fixing Clips — used to secure FORMFLASH – Lead Free Waterproof Flashing into pre-cut chases in upstands.

2 Manufacture

2.1 The product is manufactured by coating both sides of an aluminium mesh reinforcement with a mixture of elastomeric bitumen and additives.

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 the manufacturer has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 by BVQI (Certificate FR067893-1).

3 Delivery and site handling

3.1 The product is distributed in rolls, secured with a paper band bearing the product name and description, roll size and the BBA logo incorporating the number of this Certificate.

3.2 The product should be stored on end on a 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 FORMFLASH - Lead Free Waterproof Flashing.

Design Considerations

4 Use

4.1 FORMFLASH - Lead Free Waterproof Flashing, when designed and installed in accordance with the relevant parts of BS 5534 : 2014, BS 6229 : 2018, BS 8000-0 : 2014 and BS 8000-6 : 1990, is suitable for use as an alternative flashing material to traditional lead flashing on chimneys, saddles, outlets, valleys, and top edge and side abutment details, to provide a weatherproof finish in conjunction with a range of tiles and slates.

4.2 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. Pitched roofs are defined as those having falls in excess of 1:6 or 10°.

4.3 Where the product is likely to come into contact with aggressive chemicals (such as acid, alkali, oil or solvent), a test on the product should be conducted before proceeding. If any doubt arises, the Certificate holder's advice should be sought.

5 Practicability of installation

The product can be installed by competent roofing contractors experienced with this type of product.

6 Weathertightness



FORMFLASH - Lead Free Waterproof 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 a building and so contribute to the roof satisfying the requirements of the national Building Regulations.

7 Properties in relation to fire

Roof pitches ≤ 70 degrees



7.1 FORMFLASH - Lead Free Waterproof Flashing, when tested in accordance with BS 476 : 2004 Part 3⁽¹⁾, achieved an A rating for surface spread of flame.

(1) BRE Global test report 25691 dated 22 June 2009

7.2 In the opinion of the BBA, the product will achieve an AA classification in accordance with BS 476-3 : 2004 and so is unrestricted with respect to proximity to a boundary by the national Building Regulations.

Roof pitches >70 degrees



7.3 The Certificate holder has not declared a reaction to fire classification for the product to BS EN 13501-1 : 2018.



7.4 In England, Wales and Northern Ireland, the product may be used on buildings with no storey 18 m or more above the ground and 1 metre or more from a boundary; additional limitations apply on assembly and recreation buildings. With minor exceptions, the product should be included in the calculations of unprotected area.



7.5 In Scotland, the product may be used on buildings more than 1 m from a boundary. With minor exceptions, the product should be included in calculations of unprotected area.

7.6 In Scotland, the product should not be used on any building with a storey more than 11 m above the ground, or on any entertainment or assembly building with a total storey area more than 500 m², or on any hospital or residential care building with a total storey area more than 200 m².

7.7 Designers should refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers, service penetrations and combustibility limitations for other materials and components used in the overall construction.

8 Strength

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

9 Maintenance



There are no maintenance requirements, other than a regular visual check for damage. Damaged areas can be repaired by following the Certificate holder's instructions prior to completing the roof covering.

10 Durability



The product, when subjected to normal conditions of exposure and use, will have a life in excess of 20 years.

11 Reuse and recyclability

The product includes aluminium, which can be recycled

Installation

12 General

12.1 Installation of FORMFLASH - Lead Free Waterproof Flashing should be strictly in accordance with the Certificate holder's instructions and the relevant recommendations of BS 5534 : 2014, BS 6229 : 2018, BS 8000-0 : 2014 and BS 8000-6 : 1990.

12.2 The product is worked the same way as lead flashing, by bossing around shapes or folding as required. It can be cut with a sharp knife scissors or snips. In respect of health, protective gloves should be worn during installation.

12.3 Cutting and folding can be carried out at temperatures normally associated with roofing works.

12.4 Foot traffic should be avoided or a protection board should be used when installing the product as a valley lining.

12.5 Overlap joints of 150 mm minimum are required and may be sealed by gentle warming of the reverse side, ensuring that the thermofusible film is completely dispersed before making the seal. Alternatively, the overlap can be secured by additional strips of FORMFLASH – Lead Free Waterproof Flashing to make clips.

12.6 In exposed locations, additional clips fabricated from strips of FORMFLASH – Lead Free Waterproof Flashing should be used in conjunction with FormFlash Fixing Clips, to secure the free edges of the flashing to prevent lifting and distortion of the flashing in high winds. The size and frequency of clips will be determined by the extent of exposure.

13 Procedure

13.1 If necessary, the product can be pre-bent or shaped before mounting.

13.2 For flashing against the wall, it should be terminated in a 25 by 25 mm chase cut into the upstand wall dressing it into the chase a minimum of 25 mm and wedged into position using FormFlash Fixing Clips at 400 mm centres. The sides of the chase must be clean and smooth and the detail is completed by pointing with Icopal Bitumen Sealant.

13.4 The depth of the flashing over the upstand covering must not be less than 75 mm.

13.5 In exposed locations, additional clips fabricated from strips of FORMFLASH – Lead Free Waterproof Flashing should be used in conjunction with FormFlash Fixing Clips, to secure the free edges of the flashing to prevent lifting and distortion of the flashing in high winds. The size and frequency of clips will be determined by the extent of exposure.

13.6 When using the product in valleys, it should be used for termination at the base of the valley to dress into the main roof gutters. The valley gutter and flashing are joined with a double fold.

13.7 Joints can be completed by folding or by joining the overlaps. In either case, all joints must be sealed with Icopal Bitumen Sealant.

14 Repair

Damage to the product can be repaired easily prior to the installation of slates or tiles, by patching and sealing the damaged areas. Care must be taken to ensure that the watertightness of the roof is maintained.

15 Tests

Tests were carried out and the results assessed to determine:

- ash content
- dimensional checks
- weight per unit area
- tensile strength and elongation at break
- resistance to tear
- water absorption
- water vapour transmission
- dimensional stability
- low temperature flexibility
- resistance to UV ageing
- effect of heat ageing
- effect of accelerated ageing and colour stability.

16 Investigations

16.1 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.

16.2 An assessment was made of fire test data to BS 476-3 : 2004.

Bibliography

BS 476-3 : 2004 *Fire tests on building materials and structures — Classification and method of test for external fire exposure to roofs*

BS 5534 : 2014 + A2: 2018 *Slating and tiling for pitched roofs and vertical cladding — Code of practice*

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

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*

BS 8000-6 : 2013 *Workmanship on building sites — Code of practice for slating and tiling of roofs and claddings*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*

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

Conditions of Certificate

Conditions

1. This Certificate:

- relates only to the product 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.

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.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product 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.

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

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 or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA, UKNI or CE marking.

6. Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product 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.

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