

BWK Dachzubehör GmbH

Birkichstraße 1
74549 Wolpertshausen
Germany

Tel: 01246 292816 Fax: 01246 292867

e-mail: orders@vaprfree.co.uk

website: www.mercurybuildingproducts.com



Agrément Certificate

11/4854

Product Sheet 1 Issue 5

LEAD-FREE FLASHINGS

ALTO-LEAD FLASHING

This Agrément Certificate Product Sheet⁽¹⁾ relates to Alto-Lead Flashing, a polyurethane-coated aluminium sheet with a butyl adhesive backing, for use as waterproofing in flashing applications, as an alternative to lead flashing.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

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 Fifth issue: 4 March 2024

Originally certified on 12 September 2011

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

British Board of Agrément

1st Floor, Building 3, Hatters Lane
Croxley Park, Watford
Herts WD18 8YG

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tel: 01923 665300
clientservices@bbacerts.co.uk
www.bbacerts.co.uk

SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Alto-Lead 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 Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B4(1)	External fire spread
Comment:		The product is restricted by this Requirement in some circumstances. See section 2 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		The product may be restricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The product will contribute to a roof satisfy this Requirement. See section 3 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The product is restricted by this Regulation. See section 2 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 roof satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	8(3)	Fitness and durability of materials and workmanship
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
Regulation:	9	Building standards – construction
Standard:	1.1	Structure
Comment:		The product can contribute to satisfying this Standard. See section 1 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The product is restricted by this Standard, with reference to clauses and 2.6.4 ⁽¹⁾⁽²⁾ 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See section 2 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		The product is restricted by this Standard, with reference to clause 2.7.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		The product may be restricted by this Standard, with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product will contribute to a roof satisfying this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ of this Standard. See section 3 of this Certificate.

Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to satisfying 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 – conversion
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(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	23(2)	Fitness of materials and workmanship
Comment:		The product is restricted by this Regulation. See section 2 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	30(a)(b)	Stability
Comment:		The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	36(b)	External fire spread
Comment:		The product may be restricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA, Alto-Lead 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*, Chapter 6.8 *Fireplaces, chimneys and flues* and Part 7 *Roofs* Chapter 7.2 *Pitched roofs*.

Fulfilment of Requirements

The BBA has judged Alto-Lead Flashing to be satisfactory for use as described in this Certificate. The product has been assessed as external roofing, cladding and flashing.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Alto-Lead Flashing comprises an aluminium sheet coated with a protective polyurethane coating on top and either a black (winter grade) or grey (summer grade) polyisobutylene adhesive on the lower surface, protected by a release paper.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of Alto-Lead Flashing

Characteristic (unit)	Value
Roll length ⁽¹⁾ (m)	5.0
Roll width ⁽¹⁾ (mm)	150, 300, 450, 600
Thickness (mm)	0.15
Weight of roll (kg)	1.5, 3.0, 4.5, 6.0
Colour	Red, Black, Brown, Light grey and Lead grey
Finish	Structured, dimpled or smooth

(1) Other widths and lengths are available to order.

Applications

The product is used as an alternative to lead flashing on pitched roofs of new or existing domestic and non-domestic buildings, in the following applications:

- abutments
- valleys
- box gutters
- stepped flashings
- dormers and chimneys.

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessments is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

1.1 Strength and stability

1.1.1 Results of strength and stability tests are given in Table 2.

Table 2 Strength and stability results

Product assessed	Assessment method	Requirement	Result
Alto-Lead Flashing	Tensile strength to BS EN 12311-1 : 2000	Value achieved	564 N·mm ⁻²
Black (winter) grade	Nail tear test to BS EN 12310-1 : 2000	Value achieved	39 N - Longitudinal direction 38 N - Transverse direction
Black (winter) grade	Determination of dimensional stability to BS EN 1107-1 : 2000	No change in dimensions	Pass

1.1.2 On the basis of data assessed, the product has suitable strength and low temperature flexibility for its intended use.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 The Certificate holder has not declared a resistance to external fire exposure for the product to BS EN 13501-5 : 2016.

2.1.2 On the basis of data assessed, the performance of the product must be assessed in the context of the overall roof construction. These specifications must therefore be evaluated by reference to the requirements of the documents

supporting the relevant national Building Regulations and any consequent restrictions imposed by those documents, on a case-by-case basis.

2.2 Reaction to fire

2.2.1 The Certificate holder has not declared a reaction to fire classification to BS EN 13501-1 : 2018.

2.2.2 On the basis of data assessed, the product will be restricted in use under the documents supporting the national Building Regulations.

2.2.3 In England, the product, when used on walls or on roofs with pitches of greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on residential buildings more than 11 m in height or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions should also be included in calculations of unprotected area.

2.2.4 In Wales, the product, when used on walls or on roofs with pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions should also be included in calculations of unprotected area.

2.2.5 In Scotland and Northern Ireland, the product when used on walls or on roofs with pitches greater than 70°, excluding upstands, that do not achieve the minimum Class E reaction to fire classification to BS EN 13501-1 : 2018, designers should seek guidance on the proposed use of the product from the relevant Building Control Body.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

Table 3 Weathertightness performance

Product assessed	Assessment method	Requirement	Result
Alto-Lead Flashing	Water absorption to BBA method MOAT 66 : 2001	Value achieved	0.68 %
	Delamination test to BBA method MOAT 64 : 2001	Value achieved	
Black (winter) grade	- Max peel load on brick		11.03 N
	- Mean peel load on brick		7.23 N
	- Max peel load on concrete		10.57 N
	- Mean peel load on concrete		6.27 N
Black (winter) grade	Low temperature flexibility test to BS EN 495-5 : 2001 at -40 °C	No cracks or fractures	Pass
	- Longitudinal direction		Pass
	- Transverse direction		

3.1.2 On the basis of data assessed, the product, when incorporated into a roofing system designed and installed in accordance with conventional good practice and this Certificate, will adequately resist the passage of moisture to the interior of the building and so contribute to the roof satisfying the requirements of the national Building Regulations.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the product were assessed.

8.2 Specific test data were assessed as shown in Table 4.

Table 4 Results of durability tests			
Product assessed	Assessment method	Requirement	Result
Alto-Lead Flashing	Tensile strength to BS EN 12311-1 : 2000 Heat aged for 84 days at 80 °C	No significant deterioration	Pass
	Tensile strength to BS EN 12311-1 : 2000 UV aged for 2000 hours	No significant deterioration	Pass
Black (winter) grade	Dimensional stability test to BS EN 1107-1 : 2000	No significant deterioration	Pass
Black (winter) grade	Delamination test to BBA method MOAT 64 : 2001 on brick Heat aged at 80 °C for 28 days Water soaked at 23 °C for 24 hours	No significant change to bond	Pass
			Pass
Black (winter) grade	Delamination test to BBA method MOAT 64 : 2001 on concrete - Heat aged at 80 °C for 28 days - Water soaked at 23 °C for 24 hours	No significant deterioration	Pass
			Pass
Black, light grey, grey, brown, red.	Accelerated ageing test to BS EN ISO 4892-3 : 2000 - UVB condensation cycle for 100 hours	No significant discolouration	Pass
Black (winter) grade	Low temperature flexibility test to BS EN 495-5 : 2001 heat aged at 80 °C for 56 days	No cracks or fractures	- Longitudinal direction at 40 °C - Pass - Transverse direction at 40 °C - Pass

8.3 Service life

8.3.1 Under normal service conditions, the product will have a life of at least 20 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 The product can be fixed in contact with most types of brick or concrete.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Where appropriate, decks to which the product is to be applied must comply with the relevant requirements of BS 5534 : 2014, BS 8000-0 : 2014 and BS 8000-6 : 2023 and where appropriate, *NHBC Standards 2024*, Chapter 7.1.

9.1.3 Designers must 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.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A.

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the product must be carried out by competent general builder, or a contractor, experienced with this type of product.

9.4 Maintenance and repair

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

10 Manufacture

10.1.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.2 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.3 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.4 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.5 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.6 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is delivered to site in packaging bearing the product name, Certificate holder's name, size, colour, number of rolls per box and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including being stored upright, on a smooth, clean, dry surface, under cover and protected from sunlight.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the 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.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product and/or components under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

Management Systems Certification for production

The management system of the manufacturer, Clip Stanz Ood, has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by TÜV NORD CERT GmbH (Certificate 44100090017).

Additional information on installation

A.1 The product is worked the same way as lead flashing. It can be installed and worked in any direction using a mallet or roller or by hand. Cutting is achieved with scissors or a sharp knife, without the need for protective measures.

A.2 Where the product is likely to come into contact with potentially damaging chemicals (such as acid, alkali, oil or solvents), a test on the product should be conducted before proceeding. If any doubt arises, the Certificate holder's advice should be sought.

A.3 When installing the product in valleys, foot traffic should be avoided or a protection board should be used.

A.4 The backing paper on the product should be left in place until the final shape and position has been determined prior to its removal.

A.5 Surfaces should be clean and dry and any loose material removed to ensure proper adhesion.

A.6 The product should be dressed into the brickwork and sealed. Any jointing detail must have a minimum overlap of 100 mm.

A.7 Where top edges are exposed, a silicone sealant must be applied to prevent ingress of rainwater behind the flashing. Alternatively, a cover flashing turned into the joints of the brickwork can be used.

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

BS 8000-6 : 2023 *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 rubber sheets for roof waterproofing

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

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

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

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

BS EN ISO 4892-3 : 2000 Methods of exposure to laboratory light sources. Fluorescent UV lamps

MOAT 64 : 2001 Technical Guide for the Assessment of Roof Waterproofing Systems made of Reinforced APP or SBS Polymer Modified Bitumen Sheets

MOAT 66 : 2001 Technical Guide for the Assessment of Non-Reinforced, Reinforced and/or Backed Roof Waterproofing Systems made of EPDM

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 marking and 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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Herts WD18 8YG

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tel: 01923 665300
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