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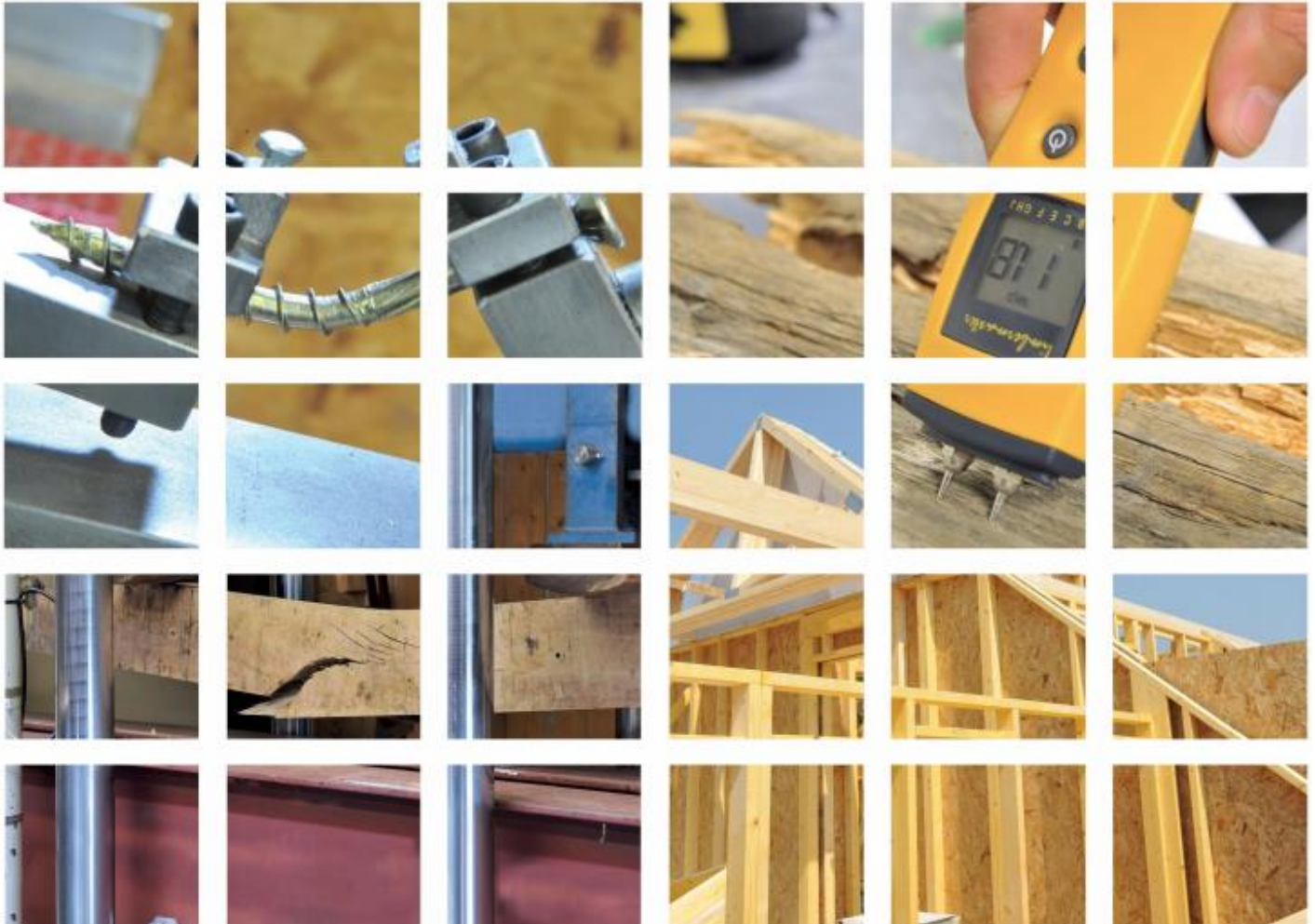


Q-Mark Registration Schedule

Aluminium Flashing

Aluflash

Protect Membranes
2 Brooklands Road
Sale
Cheshire
M33 3SS



Q-Mark Registration Schedule

Holder of Q-Mark		Protect Membranes
Product Name		Aluflash
Type and Use of Product		Aluminium Flashing
Validity:	From	02/06/2016
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Date of This Issue		02/06/2016
Issue Number		4
This Issue Replaces		Revision 18/08/2015
Relates to Certificate Number		CPS 015
Manufacturing Address/s		2 Brooklands Road Sale Cheshire M33 3SS
This Schedule Contains		16 Pages and 2 Annexes



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1 INTRODUCTION

The Q-Mark Scheme is a third-party product certification scheme operated by Exova BM TRADA Certification Ltd.

The Scheme is based on the principles of ISO 9001, ISO 17065, ISO 17021 and confirms compliance with BS EN 1396, together with a specific set of performance criteria set by Exova BM TRADA (as defined in Clause 4 of this document) in order to attain a product which performs to a high standard. The relevant standards listed above are to be read in conjunction with this document.

The Scheme covers factory production control, documentation and test/assessment evidence, and the resultant certification is specific to clearly defined products and their constituent components.

The objectives of the Scheme are:

- To improve the quality and performance of Building Products.
- To provide unambiguous evidence of compliance with the standards or methods listed.
- To provide specifiers, regulators and inspection authorities with the appropriate information for them to identify suitable products.

2 DEFINITIONS & ABBREVIATIONS

The following definitions and abbreviations are used throughout the document. Other definitions are as given in the relevant standards.

Assessment	A considered judgement to determine whether products meet the criteria laid down in the relevant Technical Specification
Audit	Visit by Exova BM TRADA or other certification body to examine the quality management system and production processes of a manufacturer or supplier, usually to determine appropriate compliance to ISO 9001, with specific emphasis on the factory production control elements
Member	Company holding membership of the Q-Mark scheme
QMS	Quality Management System (e.g. one meeting BS EN ISO 9001)
Schedule	The certification schedule, which identifies the scope and range of products covered by the membership certificate
Scheme	The Exova BM TRADA Q-Mark Construction Products Scheme

3 SCOPE

The Scheme is applicable to construction products which fall within the scopes of the product standards referenced in Clause 1 of this document, and applies to products as manufactured and supplied, and before being installed into the works.

4 PRODUCT DESCRIPTION

4.1 General

Aluflash is an Aluminium based weathering flashing material. The product comprises of a solvent lacquer coated aluminium sheet material with a self adhesive butyl backing for adhesion to roof coverings or masonry. The product is available in embossed flat or cross corrugated versions.

4.2 Table 1: Nominal Characteristics

Property	Flat	Corrugated
Thickness (mm)	0.65	4.1 (Over Corrugations)
Roll length (m)	5	5
Roll width (m)	150; 200; 250; 300; 350; 400; 450; 500; 600	150; 200; 250; 300; 350; 400; 450; 500; 600
Roll weight (kg)	1.6*	1.8*
Colours	Lead Grey & Terracotta	Lead Grey & Terracotta

* Weights indicated are for a roll width of 250mm

4.3 Intended Use

Under the scope of this certification, Aluflash has been approved for use (fully supported) as stepped, abutment, chimney and saddle flashings, to line valleys, soakers, box and secret gutters and at upstands to rooflights. Cross corrugated Aluflash is intended for use where the flashing needs to be moulded over and around complex shapes. Aluflash is considered to meet or contribute to meeting the minimum requirements of the Building Regulations in the UK and Ireland. It is conditional on the use being in accordance with the guidelines detailed in this document.

5 BUILDING REGULATIONS

Aluflash is certified under the Exova BM TRADA Q-Mark Building Products Scheme. It is the opinion of Exova BM TRADA that if used in accordance with the requirements of this scheme and in accordance with the installation manual, then the product will satisfy, or contribute to satisfying the relevant requirements of the following Regulations:

- The Building Regulations 2000 (England and Wales)
- The Building (Scotland) Regulations 2004
- The Building Regulations (Northern Ireland) 2000.
- The Building Regulations (Ireland) 1997

6 SCHEME REQUIREMENTS

Exova BM TRADA has determined that the Member conforms with the requirements within these clauses by auditing and/or other forms of verification where appropriate.

6.1 Quality Management System (QMS)

The manufacture of the products has been conducted under the control of an appropriate QMS.

The QMS shall be subject to periodic audit (not less than once per year).

All new Members are subject to an initial inspection.

6.2 Documentation

The following documents are controlled under the requirements of this Scheme:

- Manufacturing documentation (e.g. Quality Manual, procedures)
- Product specification/range documentation and Assessment
- Installation instructions
- Test reports and Sampling
- Q-Mark certificate and schedule(s)

6.2.1 Manufacturing Documentation

The Member has supplied details of his manufacturing documentation to Exova BM TRADA for review. This comprised of the Quality Manual, procedures, works instructions and test data.

7 MINIMUM QMS REQUIREMENTS

7.1 Factory Production Control

As part of the documented process control procedures the company has:

- Demonstrated that the products are being fabricated in accordance with documented manufacturing procedures from purchase of raw material to the production of the finished product.
- These procedures control all critical aspects of the production.
- Target limits are defined for each area.
- All performance characteristics claimed are controlled in order to remain consistent by including appropriate checks or testing in the QMS to ensure a consistent and similar product is produced.

7.2 Management Responsibility

The management of the company carries out regular reviews of the system, which shall include production records and any complaints that have been received. Notes are kept of any topics discussed and decisions made.

7.3 Company Representative

A member of the management team is responsible for the QMS.

7.4 Internal Audits

Routine internal audits are carried out to ensure compliance with the requirements of the scheme is met.

7.5 Documentation

Inspection and test records are kept in a format that is acceptable to Exova BM TRADA Certification for a minimum of 5 years.

7.6 Work Instructions

Work instructions and target values are placed at the critical production points throughout the manufacturing process.

7.7 Procedures for Non-conforming Product

Where factory production control/target values are out of specification there is a procedure for identifying and correcting these deficiencies. The factory production control system has been assessed and found to be able to detect non-conforming product quickly enough so that affected product can be quarantined.

7.8 Traceability

There are procedures, which enable appropriate traceability of production runs through to dispatch.

7.9 Training

The company maintains records to show that staff has been satisfactorily trained to undertake the manufacturing and inspection tasks that they have been assigned. Records are kept of this training and the personnel's job description shall be clearly defined.

7.10 Complaints

The company maintains a register of all complaints received on the quality of their product, which shows the steps they have taken to deal with the problem and their analysis of the causes. These records are kept for a minimum of 5 years.

7.11 Document Control

There are procedures in place for effectively controlling the quality of documentation issued to the relevant personnel, so that they have up-to-date procedures.

7.12 Machinery Maintenance and Calibration

All machinery and measuring / testing equipment that could affect the quality of the product is properly maintained and calibrated so that a consistent product can be produced and tested. There is a maintenance and calibration schedule. A record is kept of the maintenance and calibration carried out.

8 OTHER REQUIREMENTS OF THE SCHEME

8.1 Product Specification/Range Documentation and Assessment

The member has supplied Exova BM TRADA with product details for review. These included material specifications, dimensions, tolerances and components. This product specification forms part of the manufacturing procedure.

Should the product specification of the certified product/s change, the member shall inform Exova BM TRADA of the changes. A decision on the way forward shall be made to ensure continuation of certification.

9 TRANSPORT STORAGE AND INSTALLATION INSTRUCTIONS

9.1 General

The member shall ensure that adequate installation, storage and transport instructions are supplied with each pack or consignment of product. Any alterations to the instructions shall only be made following consultation with Exova BM TRADA.

9.2 Transport and Storage

The products shall be supplied in rolls wrapped in polyethylene on pallets. Each roll shall bear a label indicating the manufacturers name, the product name, nominal dimensions and the Exova BM TRADA Q-Mark logo and Certificate Number.

9.3 Installation

9.3.1 General

The performance of Aluflash depends on correct installation. The product shall be installed strictly in accordance with the Manufacturers' installation instructions and the requirements of this certificate. However, the quality of installation achieved on site is not covered by this certificate. It is therefore recommended that the quality of installation and workmanship is subject to appropriate checks by a competent person for each installation.

9.3.2 Application

Particular attention shall be paid to the following:

- Prior to removing the protective liner, the Aluflash should be gently moulded to the required shape. Overlaps will be necessary when using flashing without an attached cavity tray. For horizontal overlaps, a minimum of 100mm at maximum 1.6m centres should be allowed. For stepped overlaps, e.g. along sloping side edge abutment, a minimum of 50mm overlap at maximum 1.6m centres should be allowed.
- Prior to fixing the flashing, ensure that the surfaces receiving the flashing are dry and free of any loose debris or dust.
- It may be necessary to prime surfaces with Z-Led Primer where the substrate is of a bespoke granular nature or where the flashing is to be fitted below 5°C. However this has not been assessed as part of this certification.
- When installing, the protective backing from the butyl should be removed and the flashing pressed into place onto the masonry and the roof covering / soaker flashing. The product is intended to be dressed by hand or with Z-Led Aluflash dressing tool only. Bespoke lead dressing tools are not required and should not be used as damage to the weather coating or the aluminum may be caused.
- Always ensure that good contact is made with the substrate by pressing firmly with fingertips or the Z-Led Aluflash dressing tool, especially at the edges.
- When using Aluflash as part of an integral cavity tray, the cavity tray shall be fitted in accordance with the manufacturer's instructions.

10 TEST AND VERIFICATION REQUIREMENTS

10.1 Test Reports and Sampling

Exova BM TRADA has assessed the results of testing and sampling, and/or calculation that has been carried out in accordance with the scheme rules.

10.2 Initial Type Testing

Testing of the product has been carried out to determine the following properties and performance characteristics:

- Water Penetration Resistance – Hydrostatic Head
- Bend Test

- Impact Resistance
- Resistance to Staining (Motar)
- 90° Peel Strength (Wet and Dry)
- Adhesion (Pull off test method)
- Durability – Neutral Salt Spray Test (NSS)
- Durability – Blistering (Salt Spray)
- Durability – Corrosion Creep (Salt Spray)
- Durability – Cracking (Salt Spray)
- Durability – Flaking (Salt Spray)
- Durability – Chalking (Salt Spray)
- Durability – Loss of Adhesion (Salt Spray) Tape Test
- Effect of Resistance to Artificial Weathering of Coated Strip 2000 h. (Fluorescent UVB/Water)
- External Fire Spread

The test results are summarised in the Tables below.

10.2.1.1 Table 2: Water Penetration Resistance – Hydrostatic Head BS EN 20811

Aluflash					
Before Ageing		Aged – Salt Spray 1000 hrs		Aged – UV 2000 hrs	
Flat	Corrugated	Flat	Corrugated	Flat	Corrugated
> 200 cm ^a	> 200 cm ^a	> 200 cm ^a	> 200 cm ^{a; b}	> 200 cm ^c	Not Tested

^a Mean value of 3 test samples reported

^b Mean value of 2 test samples reported

^c One test sample at each age

10.2.1.2 Table 3: Bending – BS EN ISO 1519, BS 3900-E1

Aluflash	
Cracking and Detachment from Substrate	
Flat	Corrugated
None ^d	None ^e

^d Quarter inch mandrel used for bend test

^e One eighth inch mandrel used for bend test

10.2.1.3 Table 4: Impact Resistance – BS 6496 Clause 16

Aluflash	
Cracking and Detachment from Substrate	
Flat	Corrugated
None ^f	None ^f

^f Soft aluminium panel support on hard aluminium surface

10.2.1.4 Table 5: Resistance to Staining (Mortar) – BS 6496 Clause 14

Aluflash	
Detachment and Change of Appearance	
Flat	Corrugated
None	None

10.2.1.5 Table 6: 900 Peel Strength – BS EN 28510-1; ISO 8510-1

Aluflash	
50 mm Peel (N)	
Flat	Corrugated
10	10

10.2.1.6 Adhesion (Pull off Test Method) – BS EN 1542 (Brick + Concrete Tile)

Aluflash			
Brick (kPa)		Concrete Tile (kPa)	
Flat	Corrugated	Flat	Corrugated
15	15	18	18

10.2.1.7 Durability – Neutral Salt Spray Tests to BS EN ISO 9227

10.2.1.7.1 Durability (Salt Spray): Blistering– Visual Examination, BS EN ISO 4628-2, BS 3900-H2

Aluflash		
Hours	Flat	Corrugated
250	None	None
500	None	None
750	None	None
1000	Density less than 2, Size 3	None
Softening of Coating (aged) 1000 hours	None Detected	None Detected
Detachment of Coating	Slight flaking from blister domes, observed from 750 hours	None

10.2.1.7.2 Durability (Salt Spray): Corrosion Creep

Aluflash		
	Flat	Corrugated
Spread of Corrosion from Scored Line	Pass	Pass

10.2.1.7.3 Durability (Salt Spray): Corrosion Visual Examination – BS EN ISO 4628-3; BS 3900-H3

Aluflash		
	Flat	Corrugated
Corrosion (Main Panel) After 1000 Hours	Ri0-R-1 (Less than 0.05% Corroded Area)	Ri0-R-1 (Less than 0.05% Corroded Area)

10.2.1.7.4 Durability (Salt Spray): Cracking Visual Examination – BS EN ISO 4628-3; BS 3900-H4

Aluflash		
	Flat	Corrugated
Cracking (Main Panel) After 1000 Hours	None	None

10.2.1.7.5 Durability (Salt Spray): Flaking - Visual Examination – BS EN ISO 4628-3; BS 3900-H5

Aluflash		
	Flat	Corrugated
Flaking (Main Panel) After 1000 Hours	None	None

10.2.1.7.6 Durability (Salt Spray): Chalking - Visual Examination – BS EN ISO 4628-3; BS 3900-H5

Aluflash		
	Flat	Corrugated
Chalking (Main Panel) After 1000 Hours	None	None

10.2.1.7.7 Durability (Salt Spray): Loss of Adhesion - Visual Examination – Chalking (Tape Test) BS EN ISO 4628-3; BS 3900-H5

Aluflash		
	Flat	Corrugated
Chalking (Tape Test) After 1000 Hours, then 24 Hours Recovery	None	None

10.2.1.8 Effect of Resistance to Artificial Weathering – BS EN ISO 11507 (Gloss Retention)

Aluflash		
	Flat	Corrugated
Effect of resistance to artificial weathering of Coated Strip – 2000 Hours (Fluorescent UVB / Water)	Pass (ΔE 0.5)	Pass (ΔE 0.5)

10.2.1.9 External Fire Spread – BS 476-3

Aluflash		
	Flat	Corrugated
(Fully Supported on 9mm Plywood)	EXT S.AA	EXT S.AA

⁹ Roofs are surfaces with slope less than or equal to 70° from horizontal

10.2.2 Safety in Case of Fire

Refer 10.2.1.9

10.2.2.1 Reaction to Fire

Refer to 10.2.1.9

10.2.2.2 Resistance to Fire

Refer to 10.2.1.9

10.2.3 Hygiene, Health and Environment

10.2.3.1 Risk of Condensation

Not relevant.

10.2.4 Safety in Use

Not relevant.

10.2.5 Protection against Noise

Protection against noise has not been evaluated. This shall be evaluated for the structure as a whole.

10.2.6 Energy Economy and Heat Retention

Not relevant.

10.3 Aspects of Durability

Aluflash used in accordance with the requirements of this certificate should have a service life of at least 30 years. For aesthetic reasons only, the surface coating can be maintained by periodic re-coating. This would be more important in coastal atmospheres.

11 IDENTIFICATION AND USE OF THE EXOVA BM TRADA AND Q-MARK LOGOS

Correct identification of approved construction products is vital in order that purchasers and controlling authorities clearly understand the status of products presented to them. It is therefore a requirement that all products or at least the packaging of the products, covered under the Scheme are identified as "Exova BM TRADA Q-Mark Certified" or with other similar wording, and/or display the Q-Mark logo. This will assist subsequent inspection authorities to recognise acceptable products. For similar reasons, Members are encouraged to make use of the Marks on marketing and Technical documentation.

12 GUARANTEES

The Scheme makes no requirement on its Members to give a minimum guarantee. This is entirely up to the discretion of the Member.

13 ANNEX 1: EVIDENCE/DOCUMENTS USED IN THIS ASSESSMENT

1. BRE Certificate 153/10 May 2010
2. Chatfield Applied Research Laboratories Ltd – Physical and Durability Testing of coil coated soft aluminium.
3. Chatfield Applied Research Laboratories Ltd – Neutral Salt Spray Testing of coil coated soft aluminium.
4. BTTG – High Performance Materials. Test Report 11/14805.

14 ANNEX 2: NORMATIVE REFERENCES

BS EN 1107-2	Flexible Sheets for Waterproofing. Determination of Dimensional Stability. Plastic and rubber sheets for roof waterproofing.
BS EN ISO 2808	Paints and Varnishes. Determination of Film Thickness
BS EN ISO 4628-1	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H1	
	General introduction and designation
BS EN ISO 4628-2	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H2	
	Assessment of degree of blistering
BS EN ISO 4628-3	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H3	
	Assessment of degree of rusting
BS EN ISO 4628-4	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H4	
	Assessment of degree of cracking
BS EN ISO 4628-5	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H5	
	Assessment of degree of flaking
BS EN ISO 4628-6	Paints and Varnishes. Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance.
BS 3900-H6	
	Assessment of degree of chalking by tape method
BS 6100-1	Building and Civil Engineering. Vocabulary. General Terms
BS ISO 6707-1	
BS EN ISO 9001	Quality Management Systems. Requirements
BS EN ISO 9227	Corrosion tests in artificial atmospheres. Salt spray tests
BS EN ISO 11507	Paints and varnishes. Exposure of coatings to artificial weathering. Exposure to fluorescent UV lamps and water
BS EN 20811	Textiles. Determination of resistance to water penetration. Hydrostatic pressure test
ISO 811	
BS EN 28510-1	Adhesives. Peel test for a flexible-bonded-to-rigid test specimen assembly. 90° peel
ISO 8510-1	
BS EN 485-2	Aluminium and aluminium alloys. Sheet, strip and plate. Mechanical properties
BS EN 1396	Aluminium and aluminium alloys. Coil coated sheet and strip for general applications. Specifications

BS EN 1542	Products and systems for the protection and repair of concrete structures. Test methods. Measurement of bond strength by pull-off
BS EN 13523-1	Coil coated metals. Test methods. Coating thickness
BS EN 13523-8	Coil coated metals. Test methods. Resistance to salt spray (fog)
BS EN 13523-10	Coil coated metals. Test methods. Resistance to fluorescent UV light and water condensation
BS 476-3	Fires tests on building materials and structures. Classification and method of test for external fire exposure to roofs
BS 6496	Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with powder organic coatings
BS 5534	Code of practice for slating and tiling (including shingles)