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Approvals

Alwitra GmbH & Co Klaus Göbel

P O Box 3950
D-54296 Trier
Federal Republic of Germany
Tel: 00 49 651 91020 Fax: 00 49 651 9102294

**Agrément
Certificate
No 96/3293**
Second issue*

EVALON AND EVALON V ROOFING SHEETS

Revêtement d'étanchéité
Dachabdichtungen

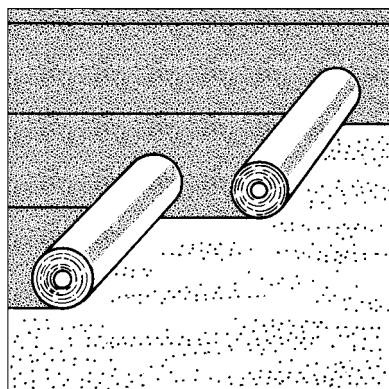
Product

• *THIS CERTIFICATE REPLACES CERTIFICATE No 89/2363/C AND RELATES TO EVALON AND EVALON V ROOFING SHEETS, MANUFACTURED FROM PVC MODIFIED EVA.*

• *The products are for use on suitably designed flat and low pitched roofs with limited access. The sheets may be mechanically fixed, fully adhered or loose-laid and ballasted to the appropriate substrates.*

• *Installation must be carried out by installers trained and licensed by ICB Ltd.*

• *The products are manufactured in Germany by Alwitra GmbH & Co Klaus Göbel and marketed in the UK by ICB (International Construction Bureau) Ltd, Unit 1, Dominion Centre, Elliott Road, Bournemouth, Dorset BH11 8JR. Tel: 01202 579208 Fax: 01202 581748. Website: www.alwitra.co.uk*



Regulations

1 The Building Regulations 2000 (England and Wales)



The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of roof waterproofing membranes with the Building Regulations. In the opinion of the BBA, Evalon and Evalon V Roofing Sheets, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: **B4(2)**

External fire spread

Comment:

Data obtained from tests to BS 476-3 : 1958 indicate that on suitable non-combustible substructures the use of the membranes will enable a roof to be unrestricted under the requirements of this Regulation. See sections 11.1 to 11.3 of this Certificate.

Requirement: **C4**

Resistance to weather and ground moisture

Comment:

Tests for water resistance on the membranes, including joints, indicate that the materials meet this Requirement. See section 8.1 of this Certificate.

Requirement: **Regulation 7**

Materials and workmanship

Comment:

The products are acceptable materials. See section 13 of this Certificate.

2 The Building Standards (Scotland) Regulations 1990 (as amended)



In the opinion of the BBA, Evalon and Evalon V Roofing Sheets, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation: **10**

Fitness of materials

Standard: **B2.1**

Selection and use of material and components

Comment:

The products comprise acceptable materials. See section 13 of this Certificate.

Regulation: **12**

Structural fire precautions

Standard: **D6.7**

Distance of sides of buildings from boundaries — Roofs and rooflights

Comment:

Data obtained from tests to BS 476-3 : 1958 indicate that on suitable substructures the use of the membranes will enable a roof to be unrestricted under the requirements of these Regulations. See sections 11.1 to 11.3 of this Certificate.

Regulation: **17**

Resistance to moisture

Standard: **G3.1**

Resistance to precipitation

Comment:

Tests for water resistance of the membranes, including joints, indicate that the use of the materials can enable a roof to satisfy the requirements of this Regulation. See section 8.1 of this Certificate.

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3 Building Regulations (Northern Ireland) 2000



In the opinion of the BBA, Evalon and Evalon V Roofing Sheets, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The membranes are acceptable materials. See section 13 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		Tests for water resistance of the system, including joints, indicate that the use of the membranes can enable a roof to satisfy the requirements of this Regulation. See section 8.1 of this Certificate.
Regulation:	E5	External fire spread
Comment:		Data obtained from tests to BS 476-3 : 1958 indicate that on suitable substructures the use of the membranes will enable a roof to be unrestricted under the requirements of this Regulation. See sections 11.1 to 11.3 of this Certificate.

4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See sections: 5 Description (5.3) and 6 Delivery and site handling (6.3).

Technical Specification

5 Description

5.1 Evalon and Evalon V Roofing Sheets are manufactured by blending ethylene vinyl acetate terpolymer (EVA), polyvinyl chloride (PVC), fillers, pigments, stabilisers and processing aids. This mixture is homogenised and thermally fused before calendaring into sheets.

5.2 Evalon V is backed with a polyester fleece (nominal weight 160 gm⁻²) and includes an unbacked selvedge of 40 mm on one side for overlapping and homogeneous welding.

5.3 The sheets are manufactured to the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristics (units)	Evalon	Evalon V
thickness (mm)	1.2	1.2 ⁽³⁾
roll width ⁽¹⁾ (m)	1.05, 1.55, 2.00	1.05, 1.55, 2.00
roll length (m)	25	25
unit weight (kgm ⁻²)	1.50	1.66
roll weight ⁽²⁾ (kg)	39.40, 58.15, 75.00	43.60, 64.40, 85.10

(1) Other sizes are available.

(2) Gross (including packing).

(3) 1.2 mm without backing, approximately 2.2 mm with backing.

5.4 Evalon and Evalon V Roofing Sheets are also available with an added fire retardant.

5.5 25 m rolls of tapes/strips of unbacked Evalon roofing sheet are available for detailing in a range of widths from 0.10 m to 0.75 m.

5.6 Other materials used with the roofing sheets include:

Alwitra adhesive type L40 — a solvent-based adhesive for bonding Evalon and Evalon V to substrates

ICB HA SA membrane adhesive — solvent-based adhesives for bonding Evalon and Evalon V to substrates

Prefabricated corner sections of Evalon — for use with Alwitra TA and TAG edge trim profiles and Alwitra wall flashing profiles

Alwitra solvent-welding agent type THF — for cold welding of lap jointing/welding work

Alwitra Liquid Evalon — for additional protection of jointings

Bituminous roofings — conforming to BS 747 : 2000, Type 5U, or the subject of a current BBA Certificate and containing a glass reinforcing core of minimum weight 100 gm⁻².

5.7 Quality control checks are carried out on incoming raw materials, during production and on the final product. Checks on the final product include tensile strength and elongation.

6 Delivery and site handling

6.1 The membranes are delivered to site in roll form wrapped in polyethylene film which has a label bearing the manufacturer's name, product

identification, width of roll, length of roll, colour and the BBA identification mark incorporating the number of this Certificate.

6.2 Rolls should be stored horizontally on a clean, level surface in a dry environment.

6.3 The adhesives, Alwitra solvent welding agent and Alwitra Liquid Evalon are all classified under the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2), and bear the appropriate hazard warning label and should be stored accordingly. The flashpoints and classification of components are given in Table 2.

Table 2 Flashpoint and hazard classification

Material	Flashpoint (°C)	Classification
Alwitra L40 Membrane Adhesive	-24	Extremely flammable
ICB HA/SA Membrane Adhesive	-18	Extremely flammable Harmful
THF	-14	Extremely flammable Harmful
Alwitra Liquid Evalon	-14	Extremely flammable Harmful

Design Data

7 General

7.1 Evalon and Evalon V Roofing Sheets are satisfactory for use as:

- (1) a fully-adhered roof covering on flat and low pitched roofs with limited access, or
- (2) a mechanically-fixed roof covering on flat and low pitched roofs with limited access, or
- (3) a loose-laid roof covering on flat and low pitched roofs ballasted with gravel or any other material (eg paving slabs on paving supports, etc) approved by the manufacturer (warm roofs, duo roofs, terrace roofs and inverted roofs).

7.2 Limited access roofs are defined for the purpose of this Certificate as those roofs subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc. Where traffic in excess of this is envisaged special precautions, such as additional protection to the membrane, must be taken.

7.3 Flat roofs are defined for the purpose of this Certificate as those roofs having a minimum finished fall of 1:80. For design purposes, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc. Pitched roofs are defined as those having falls in excess of 1:6.

7.4 Decks to which the products are to be applied must comply with the relevant requirements of BS 6229 : 1982, BS 8217 : 1994 and, where appropriate, NHBC Standards Chapter 7.1 or the

Zurich Building Guarantees Technical Standards, Section 5, clause 5.9.3.19.

7.5 Insulation systems or materials used in conjunction with the products must be approved by the manufacturer and must be:

- (a) as described in the relevant clauses of BS 8217 : 1994, and/or
- (b) the subject of a current BBA Certificate and be used in accordance with, and within the limitations of, that Certificate.

7.6 When used over polystyrene-based insulation products, an isolating layer must be used in areas where cold solvent welding is to be performed, or where substrate adhesive may be used. This is to protect the insulation layer from the solvents present in these products.

7.7 Where contact with solvent-based products (eg wood preservatives) is likely, consideration should be given to the use of an isolating layer and the advice of the manufacturer must be sought.

8 Weathertightness



8.1 The results of test data confirm that the membrane, and joints in the membrane, when completely sealed and consolidated, will adequately resist the passage of moisture to the inside of the building and so meet the requirements of the national Building Regulations:

England and Wales

Approved Document C, Requirement C4, Section 5.1

Scotland

Regulation 17, Standard G31

Northern Ireland

Regulation C4.

8.2 The product is impervious to water and will achieve a weathertight roof covering capable of accepting minor structural movements without damage.

9 Resistance to wind uplift

9.1 The adhesion of fully-bonded Evalon and Evalon V Roofing Sheets to the substrate is governed by the cohesive strength of the substrate. On substrates of high cohesive strength, the adhesion of the products is sufficient to resist the effect of wind suction, thermal cycling and minor structural movements occurring in practice. However, in areas of high wind exposure consideration should be given regarding the additional use of fixings, especially on porous substrates.

9.2 When Evalon and Evalon V Roofing Sheets are to be mechanically fixed, the number of fixings and their position will depend on:

the wind uplift forces to be resisted
the pull-out strength of fixings
elastic limit of the membrane
appropriate safety factors.

9.3 The number of fixings used should be established by reference to the wind uplift forces calculated in accordance with either CP 3 : Chapter V-2 : 1972 or BS 6399-2 : 1997 on the basis of the maximum permissible load of 0.4 kN per fixing.

9.4 When used in a loose-laid and ballasted system the precise ballast requirements should be calculated in accordance with the relevant parts of CP 3 : Chapter V-2 : 1972 or BS 6399-2 : 1997. The use of concrete slabs, etc on suitable supports should be considered in areas of high wind exposure and the advice of the manufacturer should be sought. The membrane should always be ballasted with a minimum depth of 50 mm of aggregate.

10 Resistance to foot traffic

The results of test data indicate that the products can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance operations. Reasonable care should be taken, however, to avoid puncture by sharp objects or concentrated loads. Where regular traffic is envisaged, a walkway should be provided using either concrete slabs supported on bearing pads or other appropriate means of membrane protection (eg rubber matting; plastic tiles).

11 Properties in relation to fire



11.1 When tested in accordance with BS 476-3 : 1958 a system comprising:

- (a) a 12 mm thick chipboard deck, one layer of bitumen bonded (95/25 grade) bitumen felt vapour barrier, one bitumen bonded (95/25 grade) 35 mm polyisocyanurate insulation layer covered by Evalon V bonded using L40 adhesive achieved an EXT.F.AB rating.
- (b) a 12 mm thick chipboard deck, one layer of torched-on bitumen felt vapour barrier, one bitumen bonded (95/25 grade) 50 mm polyisocyanurate insulation layer covered by Evalon V FR bond using L40 adhesive achieved an EXT.F.AA rating.

11.2 A roof waterproofed with the membranes and ballasted with a minimum depth of 50 mm of aggregate shall be deemed to be of designation AA.

11.3 The designation of other specifications, for example, when the system is used on combustible substrates or insulation, should be confirmed by:

England and Wales

Test or assessment in accordance with approved document B, Appendix A, Clause 1

Scotland

Test to confirm compliance with Standard D6.7

Northern Ireland

Test or assessment by a UKAS accredited laboratory or an independent consultant with appropriate experience.

12 Maintenance

12.1 Roofs covered with the membranes should be the subject of annual inspections, as is good practice with single-layer roof waterproofing systems, to ensure continued security and performance, especially for unballasted roofs.

12.2 In the event of accidental damage, repair should be carried out in accordance with Alwitra GmbH & Co's instructions. Repair consists of applying a patch of Evalon, extending at least 50 mm beyond the defect. The damaged area should be cleaned back to the unweathered material and the patch hot air or solvent welded to the roofing sheet.

13 Durability



Accelerated weathering tests confirm that satisfactory retention of physical properties is achieved. Available evidence indicates that Evalon and Evalon V Roofing Sheets should have a life of at least 25 years.

Installation

14 General

14.1 Installation of the Evalon and Evalon V Roofing Sheets must be carried out by trained installers working in accordance with the relevant clauses of the manufacturer's instructions, BS 8000-4 : 1989 and this Certificate.

14.2 The products may be laid in conditions normal to roofing work and should not be laid in wet or damp weather, or at temperatures below 5°C, unless suitable precautions are taken.

14.3 Deck surfaces should be clean, dry, and free from sharp projections such as nail heads, concrete nibs, etc. When used as a repair medium over a traditional bitumen felt system, the surface dressing must be removed. On rough decks or when used over mineral surfaced bituminous felts, Evalon V must always be used.

14.4 Solvent-based adhesives in adhered specifications or cold solvent welding must not be in direct contact with polystyrene based products, as the active solvents present are not compatible with such products.

15 Procedure

Fully bonded

15.1 Where necessary, a first layer of bitumen felt conforming to BS 747 : 2000, Type 5U, should be bonded to the substrate using traditional pour and roll bitumen bonding techniques. Alternatively, a first layer of bitumen felt, containing at least a 100 gm⁻² glass reinforcing core, the subject of a current BBA Certificate, and used within the limitations of that Certificate, may be used.

15.2 The first layer of bitumen felt must be allowed to cool prior to the application of Evalon or Evalon V. The first layer should then be coated with either L40 or ICB HA/SA membrane adhesive at a rate of 0.20 kgm⁻² to 0.50 kgm⁻² depending on the condition of the substructure.

15.3 The roofing sheets should then be unrolled into the adhesive taking care not to stretch the material. Adjacent sheets should overlap by a minimum of 40 mm. Roll ends should overlap a minimum of 40 mm for Evalon, and be butt jointed for Evalon V. The Evalon V joints must be waterproofed using strips of Evalon, at least 80 mm wide, centrally welded over the joint.

15.4 Surplus adhesive must be removed from the joint areas prior to welding. Lap welding techniques are described in section 16.

15.5 When used as a repair medium over traditional built-up bitumen roofing systems, the existing covering must be made good. Surface dressings, such as mineral chippings, should be removed. The membranes may then be bonded directly to the existing roof covering in the manner described in sections 15.2 to 15.4.

Mechanically fixed

15.6 The Evalon roofing sheets may be used in mechanically fixed systems either as a single layer or over a bonded bitumen layer (as described in section 15.1).

15.7 The membranes should be unrolled over the substrate, taking care to avoid any folds or ripples. Edge overlaps to adjacent sheets must be a minimum of 100 mm. End laps for the Evalon membrane should be a minimum of 40 mm. Ends of Evalon V should be butt jointed and waterproofed with a strip of Evalon, at least 80 mm wide, centrally over the joint.

15.8 The position of fixings, and the number required, will depend upon the type used, the type of deck and the wind uplift forces to be resisted.

15.9 The first sheet is fixed to the substrate with the fixing plates positioned 10 mm from the sheet edge. The adjacent sheet should be laid over the first sheet and lap jointed along the final 40 mm as described in section 16.

15.10 Perimeter fixings at sheet edges should be waterproofed using 100 mm wide strips of Evalon welded to the membrane using the techniques described in section 16.

15.11 A range of prefabricated accessories is available from the manufacturer. Advice on the selection of accessories should be sought from Alwitra.

16 Lap joints

Hot air welding

16.1 Welding may be achieved by automatic or hand-operated hot air welding machines in accordance with Alwitra's instructions.

16.2 Lap joint areas on both sheets must be cleaned on a minimum width of 50 mm and then dried.

16.3 The weld joint must be a minimum width of 20 mm. When using a hand-held welding machine, the seam must be rolled immediately using a silicone rubber or steel seam roller, to ensure an even bond.

16.4 On completion of the weld, the seam should be tested by running a metal probe down the junction to check for continuity.

Solvent welding

16.5 Welding may be achieved using Evalon cold weld solvent in accordance with Alwitra's instructions.

16.6 The lap joint areas on both sheets must be cleaned to a minimum width of 50 mm and then dried.

16.7 Both surfaces must be coated with solvent, to a minimum width of 30 mm and be brought together. The joints must be rolled immediately using a silicone rubber or a steel seam roller to ensure an even bond.

16.8 Seams are finally tested in the manner described in section 16.4.

Technical Investigations

The following is a summary of the technical investigations carried out on Evalon and Evalon V Roofing Sheets.

17 Tests

Technical data from tests carried out by BAM were evaluated by the BBA in the context of UK roofing practices and Building Regulations. The results from these tests, which show typical values for the materials, are summarised in Tables 3 to 6.

Table 3 Characteristics of polyester fleece

Test (units)	Method ⁽¹⁾	Mean results	
		Longitudinal	Transverse
Tensile strength (N per 50 mm)	DIN 53-455	281	431
Elongation (%)	DIN 53-455	68.4	52.5

(1) The test document is detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the document.

Table 4 Physical properties — general

Test (units)	Method ⁽¹⁾	Mean results	
		Evalon	Evalon V
Water vapour permeability (gm ⁻² day ⁻¹) (90% RH/38°C)	MOAT 27 : 5.1.1.1	7.80	7.29
Water vapour resistance (MNsg ⁻¹) (90% RH/38°C)	MOAT 27 : 5.1.1.1	26.3	28.1
μ factor	MOAT 27 : 5.1.1.1	11282	11966
Low temperature flexibility (°C)	MOAT 27 : 5.4.2	-35	-35

(1) The test document is detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the document.

Table 5 Physical properties — directional

Test (units)	Method ⁽¹⁾	Mean results			
		Evalon		Evalon V	
		Long ⁽²⁾	Trans ⁽³⁾	Long ⁽²⁾	Trans ⁽³⁾
Dimensional stability (%)	MOAT 27 : 5.1.6.1/2	-3.55 +1.1	+0.48 +0.40	-0.46	-0.17
free				—	—
restrained					
Tensile strength (N per 50 mm)	DIN 53-455	—	—	777	729
Tensile strength (Nmm ⁻²)	DIN 53-455	14.7	13.8	—	—
Elongation (%)	DIN 53-455	375	452	266	269
Modulus of elasticity (Nmm ⁻²)	DIN 53-457	8.94	12.40	21.00	17.10
Tear propagation (Nmm ⁻¹)	DIN 53-515	—	—	65.8	56.9
Tear strength (N)	MOAT 27 : 5.4.1	162	212	353	329

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

(2) Longitudinal direction.

(3) Transverse direction.

— not tested.

Table 6 Service performance

Test (units)	Method ⁽¹⁾	Mean results	
		Evalon	Evalon V
Fatigue cycle unaged	MOAT 27 : 5.1.8	pass	pass
28 days heat aged at 80°C		pass	—
Peel resistance (N per 50 mm)	MOAT 27 : 5.1.3		
substrate:			
bitumen felt		9.7	26.1
chipboard		48.2	51.8
asbestos cement		—	63.2
galvanized steel		—	133
Wind uplift (kPa) ⁽²⁾	MOAT 27 : 5.1.2		failure at 4
Thermal shock (kPa) ⁽²⁾	MOAT 27 : 5.1.5		failure at 6
Dynamic indentation expanded polystyrene substrate	MOAT 27 : 5.1.10		I ₃
perlite substrate			I ₄
Static indentation expanded polystyrene concrete substrate	MOAT 27 : 5.1.9		L ₄
			L ₄
Joint tensile strength (N per 50 mm)	MOAT 27 : 5.2.2		
heat weld			572
solvent weld			572

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

(2) Adhered systems examined.

— not tested.

18 Other investigations

18.1 Existing data on the fire performance of the products to BS 476-3 : 1958 were examined.

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

18.3 Visits were made to existing sites to assess the performance in use.

18.4 Existing data on the mechanical fixings, and wind uplift testing on the mechanically fixed system, from WSP (Aachen), were examined.

Additional Information

The quality management system of ICB (International Construction Bureau) has been assessed and registered as meeting the requirements of BS EN ISO 9002 : 1994 by the National Quality Assurance Limited (Certificate No 7395).

The quality system of Alwitra GmbH & Co Klaus Göbel has been assessed and registered as meeting the requirements of DIN EN ISO 9001 by TÜV Rheinland (Certificate No 091005463).

Bibliography

BS 476 *Fire tests on building materials and structures*

BS 476-3 : 1958 *External fire exposure roof test*

BS 747 : 2000 *Reinforced bitumen sheets for roofing — Specification*

BS 6229 : 1982 *Code of practice for flat roofs with continuously supported coverings*

BS 6399 *Loading for buildings*

BS 6399-2 : 1997 *Code of practice for wind loads*

BS 8000 *Workmanship on building sites*

BS 8000-4 : 1989 *Code of practice for waterproofing*

BS 8217 : 1994 *Code of practice for built-up felt roofing*

BS EN ISO 9002 : 1994 *Quality systems. Model for quality assurance in production, installation and servicing*

CP 3 *Code of basic data for the design of buildings*

CP 3 : Chapter V *Loading*

CP 3 : Chapter V-2 : 1972 *Wind loads*

DIN 53-455 : 1981 *Testing plastics, tensile test*

DIN 53-457 : 1987 *Testing plastics. Determining the modulus of elasticity in tensile, pressure and flexural tests*

DIN 53-515 : 1977 *Testing rubber, elastomers and plastic films. Tear propagation test using the Graves angle test with incision*

DIN EN ISO 9001 : 1994 *Quality systems. Model for quality assurance in design, development, production, installation and servicing*

MOAT No 27 : 1983 *General Directive for the Assessment of Roof Waterproofing Systems*

Conditions of Certification

19 Conditions

19.1 This Certificate:

- (a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (d) is copyright of the BBA.

19.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

19.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

- (b) continue to be checked by the BBA or its agents; and

- (c) are reviewed by the BBA as and when it considers appropriate.

19.4 In granting this Certificate, the BBA makes no representation as to:

- (a) the presence or absence of any patent or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the nature of individual installations of the product, including methods and workmanship.

19.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do 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 or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future 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 installation and use of this product.



In the opinion of the British Board of Agrément, Evalon and Evalon V Roofing Sheets are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 96/3293 is accordingly awarded to Alwitra GmbH & Co Klaus Göbel.

On behalf of the British Board of Agrément

Date of Second issue: 26th July 2001

Chief Executive

**Original Certificate issued 28th October 1996. This revised version issued to include reference to the revised national Building Regulations and associated text, the addition of the CDM Regulations, change of marketing company address and general updating of text.*