alwitra

DIE DACHMARKE



EVALON®

Roofing and Water-proofing Membranes

EVALON®

The ultimate roofing system.

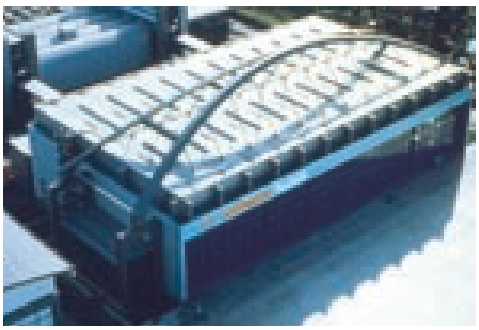
Perfect Solutions for Flat Roofs



▲ Ice skating rink, Erfurt, Germany



▲ Esplanade, Singapore



▲ Jumbo aircraft hangar, Hamburg Airport



▲ Mega Tennis, Sao Paulo, Brazil

alwitra is the expert when it comes to waterproofing flat and pitched roofs. With a system of integrated components and many years of experience and know-how, we can offer perfect solutions for new build and roof refurbishment.

Positive proof:
alwitra EVALON® roofing membranes

A superior thermoplastic roofing membrane with optimum properties, combining more than 40 years of competence and flat roof experience. Worldwide, over 120 million square metres of flat roofs have now been effectively and reliably covered with alwitra single-ply roofing membranes. This area increases by several million square metres every year. Flat roofing expertise is also demonstrated in the way in which alwitra and their agents around the world care about their customers. One of the largest teams of expert consultants always keeps in personal touch with clients on site. Working together, individual flat roofing solutions are developed to ensure long lasting performance.



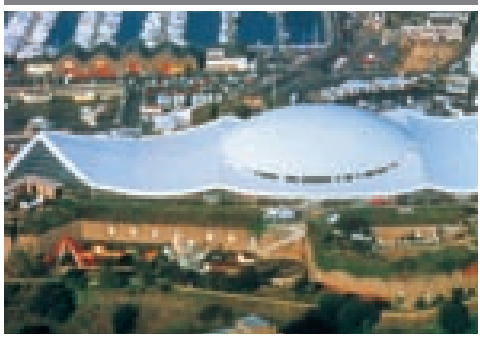
▲ Surestart, Bournemouth



▲ Harrogate International Centre



▲ Orangery, Kassel, Germany



▲ Fort Regent, Jersey



▲ Coronel cathedral, Brazil



▲ Motorway service area, Germany

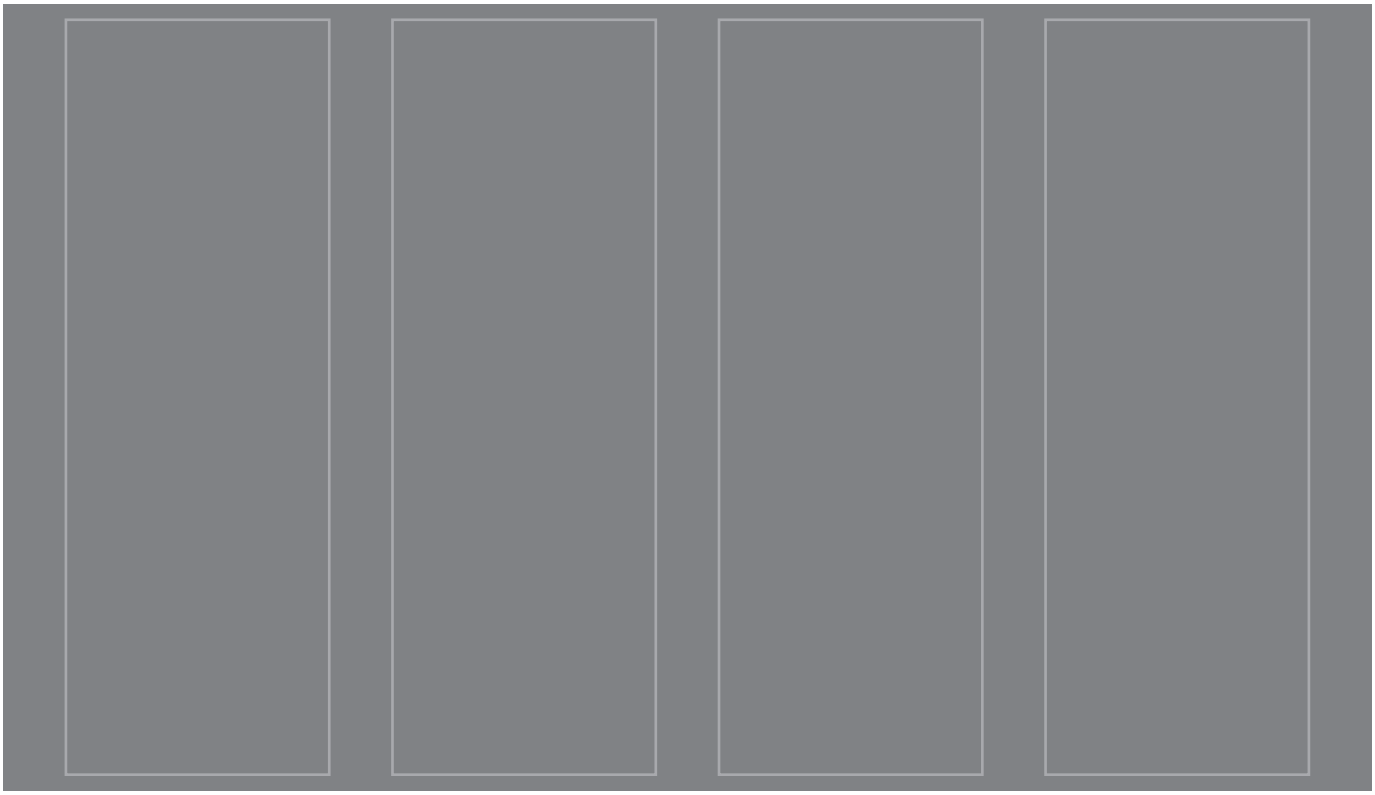
alwitra EVALON® roofing membranes are part of the tried and tested alwitra product systems. Furthermore, these systems comprise:

roofing and waterproofing membranes (thermoplastic membranes) – roof edge trims – wall cappings – wall flashing profiles – paint finishes – coated steel sheets – roof lights (including smoke venting systems) – rainwater outlets – flat roof vents – paving slab supports

EVALON® Roofing and Waterproofing Membranes

CE marking 1343 - BPR - 06-1432

EVALON® roofing and waterproofing membranes are superior quality VET membranes according to DIN 18531-2 and DIN 18195-2 for single-ply roofing of various types of flat (and pitched) roof constructions and application methods as well as for the waterproofings of foundations.
Product and system tests are carried out according to the requirements of the European standards DIN EN 13956 and DIN EN 13967 and provide for the basis and the entitlement to CE marking.
EVALON® membranes consist of a high polymer alloy of ethylene vinyl acetate terpolymer (EVA) and polyvinyl chloride (PVC), a purpose-made thermoplastic material.
Both components are solids and remain unchanged over time. Thus, physical properties remain unaltered and optimum life expectancy is assured.
The material is calendered to homogeneous soft and elastic membranes and is either laminated to a polyester fleece backing (EVALON® V), a synthetic scrim and glass fleece (EVALON® GV), a synthetic scrim with bitumen-free self-adhesive coating (EVALON® SK) or remains unbacked (EVALON®), depending on application specifics.

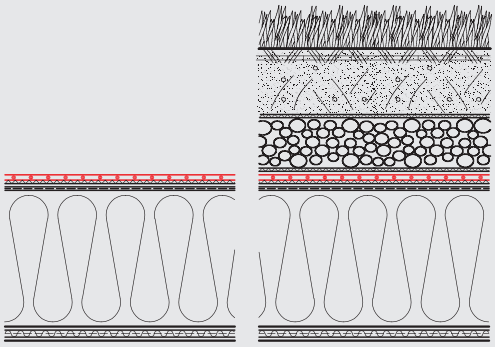
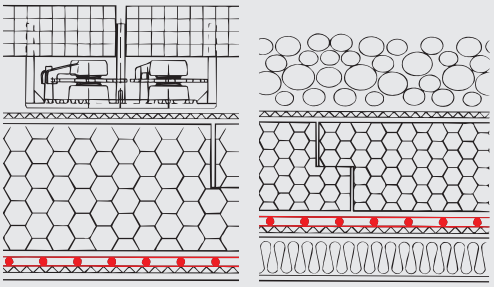
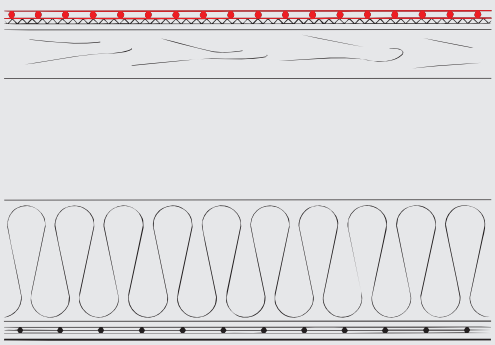


EVALON® | EVALON® V | EVALON® GV | EVALON® SK

Top quality - ensured by national and international testing as well as in-house and external control

• Staatliche Materialprüfungsanstalt (MPA), Darmstadt, Germany	- external quality control - Certificate of conformity according to DIN EN 13956 and DIN EN 13967
• TÜV Rheinland Group, Cologne, Germany	Comprehensive external quality control of the product system
• Forschungs- und Material (FMPA) Baden-Württemberg, Stuttgart, Germany • Gesellschaft für Materialforschung und Prüfanstalt für das Bauwesen (MFPA), Leipzig, Germany • Materialprüfungsamt Nordrhein-Westfalen (MPA NRW), Dortmund, Germany	Tests with General Building Construction Supervision Test Certificate (AbP) according to DIN 4102-7 (Resistance to flying sparks and radiant heat) as well as DIN EN V1187-1 (external fire load) with classification according to DIN EN ISO 13501-5 Tests according to DIN 4102-2 (building material class B2) and DIN EN ISO 11925-2 with classification according to DIN EN 13501-1
• Landwirtschaftskammer Rheinland, Lehr- und Versuchs anstalt für Garten und Landschaftsbau, Essen, Germany • Forschungsanstalt, Fachgebiet Landschaftsbau, Geisenheim, Germany	Testing according to FLL 84 (root penetration resistance) Testing according to FLL 99 (root/rhizome penetration resistance)
• British Board of Agrément (BBA), Garsten/Watford	Tests according to Building Standards Regulations (England, Wales and Scotland), Certificate No. 96/3293
• Norisko Construction (Dekra), Paris, France	Cahier des Clauses Techniques
• Factory Mutual, USA	FM-Approval, Class 4470

Fields of application
Flat roofs

	Application method		
	ROOFING MEMBRANES loosely laid with ballast gravel, green roofs, concrete paving slabs	**ROOFING MEMBRANES loosely laid mechani-cally fastened** through the seam overlap or with field fastening	**ROOFING MEMBRANES bonded** using either cold or hot applied adhesives
non-ventilated roofs (warm roofs) 	**EVALON®** **EVALON® V** depending on the use and the condition, in particular roughness of the substrate	**EVALON®** **EVALON® V** **EVALON® GV** depending on the building material class of the thermal insulation material and the approved roof build-up e.g. EVALON® GV on unbacked PS rigid foam boards without separation and fire retarding layer	**EVALON® V** **EVALON® SK** on backed thermal insulation materials or fire retarding layer, depending on the approved roof build-up directly on bituminous layers to be refurbished
inverted roofs **DUO roofs** 	**EVALON®** **EVALON® V** depending on the condition, in particular roughness of the substrate		
ventilated (double-layer) roofs (cold roofs) 	**EVALON®** **EVALON® V** depending on the condition, in particular roughness of the substrate	**EVALON®** **EVALON® V** **EVALON® GV** depending on the building material class of the upper layer and the approved roof build-up e.g. EVALON® V on veneer board BFU 100	**EVALON® V** **EVALON® SK** on a non-inflammable upper layer or fire retarding layer, depending on the approved roof build-up

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Performance Profile

EVALON® Roofing and Waterproofing Membranes

EVALON®

The ultimate roofing system.

- durable
- safe
- reliable
- economical
- for new build and
- refurbishment

- are superior quality thermoplastic single-ply roofing membranes.
- are **homogeneous**, soft, flexible with an extremely high percentage of high polymer solids.
- have a light smooth surface which does not retain dirt and promotes good **solar reflectivity**.
- offer excellent thermal and mechanical properties due to high strength combined with substantial elongation.
- are resistant to damaging radiation without protective coating. Suitable for use under walkways, decking and roof gardens.



▲ Hereford, England



▲ Hot springs resort, Germany

- are tested to external fire loads or resistance to sparks and radiant heat (hard roofing). The fire load is five times lower than that of built-up felt roofing.
- are resistant to chemicals and environmental impact.
- are **resistant to root/rhizome** penetration according to FLL testing and can be applied on green roofs without any additional root protection layer.
- are **compatible with bitumen** and can be directly applied to all approved insulation materials including rigid polystyrene foam boards and in contact with conventional construction materials.
- have an extremely low vapour diffusion resistance, allowing moisture to escape from the roof build-up over the whole membrane surface.
- are available in a range of colours, at a width of up to 2.05 m with a standard length of 25 m (specified lengths on request), i. e. up to 50 m^2 of seamless waterproofing, providing optimum waterproofing solutions for each roof shape and application method.
- are suitable for all application methods and flat roof configurations (unbacked, with polyester or glass fleece backing or with self-adhesive coating on underside).
- are easy and quick to install by homogeneous hot-air or solvent welding in the overlap area.
- can be **recycled**.



EVALON® Solar
is the world's first power generating roofing membrane

Product Range

	EVALON® roofing membranes	EVALON® V roofing membranes	EVALON® GV roofing membranes	EVALON® SK roofing membranes
Membrane thickness excluding backing (mm)	1.2/1.5[1]	1.2/1.5[1]	1.2/1.5[1]	1.2/1.5
Membrane widths (m)	1.05/1.55/2.00	1.05/1.09[2]/1.55/ 1.59[2]/2.05	1.05/1.09[2]/1.55	1.05
Cut widths (cm)	10/16/20/25/33/ 50/66/75	54/79	54/79	
Standard lengths (m)	25	25	25	15
Specified lengths	on request	on request	on request	on request
Standard colours	white/light grey/ slate grey	white/light grey/ slate grey	white/light grey/ slate grey	white/light grey/ slate grey
Special colours [3]	on request	on request	on request	on request
EVALON® preformed details **• Internal corners** **• External corners** **• Expansion joint tape** **• Flashing collar [4]**	 • • • •	 • • • •	 • • • •	 • • • •
EVALON® coated steel sheet (sheets 1m x 2m) (coil 30 x 1m)	white/light grey slate grey	white/light grey/ slate grey	white/light grey/ slate grey	white/light grey/ slate grey
EVALON®-SKA flashing membrane with self-adhesive coating on underside **• Length (m)** **• Widths (cm**	 25 75[2]/66[2]/42/33	 25 75[2]/66[2]/42/33	 25 75[2]/66[2]/42/33	 25 75[2]/66[2]/ 42/33
ADHESIVES **• alwitra-L 40** **• alwitra-PUR D** **• Lf 100D**	 •[5]	 • • •		
alwitra wash primer SK/SKL				•
alwitra solvent-welding agent	•	•	•	•
EVALON® liquid	•	•	•	•

[1] other thicknesses on request [2] with welding edge on both sides [3] light green/red/brown/black/beige
[4] for alwitra flat roof outlets and vents [5] only for contact bonding

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Technical Data

Excerpt **Tests according to DIN EN 13956 and DIN EN 13967**			**EVALON®** unbacked	**EVALON® V** **EVALON® V FR** with polyester fleece backing	**EVALON® GV** with synthetic scrim and glass fleece backing	**EVALON® SK** with polyester scrim backing and self-adhesive coating
Properties	**Testing method**	**Unit**	**Result** [a]	**Result** [a]	**Result** [a]	**Result** [a]
Visible defects	EN 1850-2		passed			
Effective thickness (e_{eff}) of the waterproofing	EN 1849-2	mm	1.2/1.5			1.2/1.5
Water tightness	EN1928 method B	kPa	≥ 400			
External fire performance (for Germany DIN 4102- 7) For UK BS476 Part 3: 1958	ENV 1187 or DIN 4102-7 BS476 Part3		class B_{ROOF} (t1) Resistant to sparks and radiant heat, confirmed by General Building Construction Supervision Test Certificates, F.AB (F.AA using Evalon FR)			
Reaction to fire	EN 13501-1		class E			
Joint peel resistance	EN 12316-2	N/ 50mm	≥ 80			
Joint shear resistance	EN 12317-2	N/ 50mm	≥ 200			
Tensile strength	EN 12311-2	N/mm² N/50mm	≥ 12.5			
Max. tensile force				≥ 500	≥ 700	≥ 700
Elongation at break	EN 12311-2	%	≥ 300			
Elongation at max. tensile force		%		≥ 60	≥ 10	≥ 10
Resistance to impact load	EN 12691 method A	mm	≥ 300			
Resistance to static load	EN 12730 method B	kg	≥ 20			
Tear resistance	EN 12310-1 EN 12310-2	N N	≥ 80 ≥ 80			
Resistance to root penetration	prEN 13948		passed	passed [b]	passed [b]	passed [b]
Dimensional stability	EN 1107-2	%	≤ 2	≤ 1	≤ 1	≤ 1
Low temperature flexibility	EN 495-5	°C	≤ - 25			
Durability (UV exposure, high temperatures and water)	EN 1297	visual control	passed			
Long Term Exposure Water tightness	EN 1296 EN 1928	kPa	≥ 60			
Long Term Exposure Water tightness	EN 1847 EN 1928	kPa	≥ 60			
Hail resistance	EN 16583	m/s	≥ 30			
Water vapour permeability	EN 1931	μ	20,000			
Bitumen compatibility	prEN 1548		passed			

[a] Minimum requirements without specified tolerances
[b] Waterproofing and sealing of seams identical with EVALON®, unbacked

The results contained in this document are taken from tests and comply with the current standards as of 01/07. Normal tolerances apply.
alwitra reserves the right to improve their products at any time without prior notice.

01/07

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