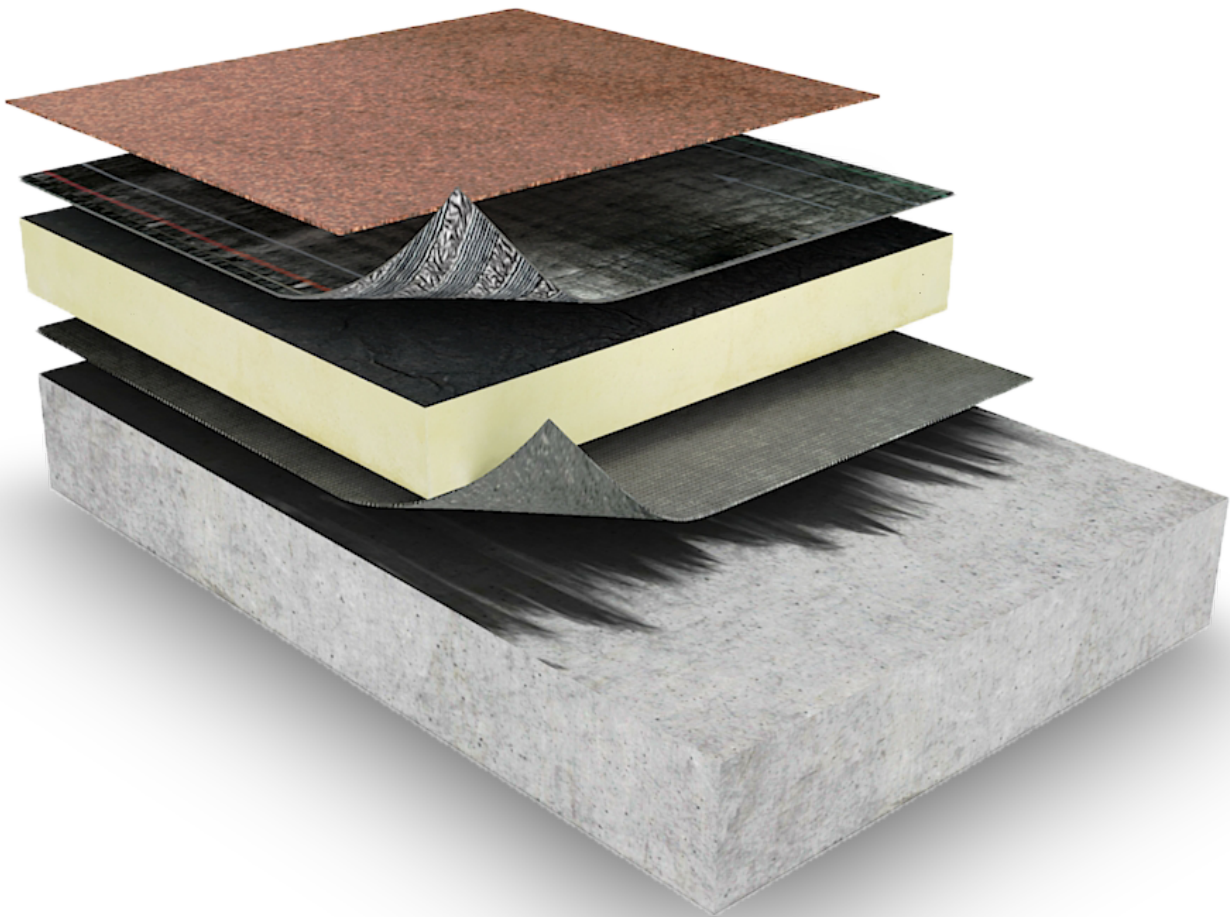


BUILT UP ROOFING SYSTEMS

Technical Data Sheets



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Cap Sheets



StressPly[®] Evolution

PRODUCT DESCRIPTION

StressPly Evolution is an elastomeric modified bitumen waterproofing membrane manufactured in a superior calendaring process by saturating and coating a polyester carrier with a waterproofing compound made from special grade of modified bitumen with SBS elastomers and fillers. The SBS modifiers boost the thermal, mechanical and aging characteristics of the membrane compound; the non-woven spun-bond polyester carrier reinforcement provides the membrane with its excellent tensile strength, tear/puncture resistance and elongation properties. StressPly Evolution upper surface is finished with mineral slate, while the lower face is laminated with thermo-fusible polyethylene film.

FEATURES AND BENEFITS

High U.V. Resistance

StressPly Evolution with its mineral slate upper finish offers excellent protection from the damaging effects of U.V. radiation.

Excellent Chemical and Bacteria Resistance

The special grade of modified bitumen used in the manufacturing of StressPly Evolution has excellent resistance to alkaline solutions, light acidic solutions and bacteria.

Superior Strength

The StressPly Evolution membrane is reinforced with high strength polyester. The superior strength provided by the polyester scrim resists the movement created by today's modern buildings. In addition, the polyester scrim in StressPly Evolution provides tensile strength in excess of 800 Newtons longitudinally. This translates to long-term resistance to splits and tears in the completed StressPly Evolution roof system.

Absolute Impermeability to Water

The exceptional formulation of StressPly Evolution means that the membrane is impermeable to water, coupled with the excellent thermal, mechanical and ageing characteristics StressPly Evolution really is a waterproofing solution you can rely on.

ROLL SIZE & PACKAGING

6 x 1 m - 25 rolls per pallet - 42 kg/roll

COLOURS

Charcoal and Brown

STORAGE

Rolls should be stored up-right in cool conditions and out of direct sunlight. Never lay the rolls on their side.

USES

StressPly Evolution can be used in conjunction with other Garland High Performance Roofing products, as well as with conventional polyester felt underlayment. Specifications for torch applied roofing systems are available. It can also be used to repair splits, cracks or other deteriorated areas of an existing asphalt based roofing system.

APPLICATION INSTRUCTIONS

- The substrate surface should be clean, dry, smooth and free from any irregularities & dust.
- For a better adhesion it may be treated with a bituminous primer like Garland Garla-Prime.
- StressPly Evolution is installed by using propane torch welding and fully or partially bonding the membrane to the substrate depending on the waterproofing system design requirements.
- For fully bonded systems, the membranes should be installed with propane torch and exposing the lower surface to the flame till the polyethylene film burns and the bituminous mass starts melting creating a heat weld between the membrane and the substrate.
- For sloping roofs, the membrane should be laid from the lower point of the roof with longitudinal direction of rolls perpendicular to slope direction.
- Edges shall be overlapped, always by torch, by at least 75 mm on the sides and 150 mm on the end lap so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven polyester reinforcement, reinforced with fibre glass filaments (composite).

Compound type:

Bitumen modified with elastomeric rubber (SBS).

Surface finishing:

Upper side: Mineral Slate
Lower side: Polyethylene Film

StressPly[®] Evolution

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Compound type			SBS		
Reinforcement type			FC Polyester		
Upper surface finish			Mineral Slate		
Lower surface finish			PE Film		
Length	EN 1848-1	MLV	6	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	4	mm	± 10%
Weight	EN 1849-1	MLV	7	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	F	-	
Resistance to fire	EN 13501-5	MDV	F ROOF		
Shear resistance of joint	EN 12317-1	MDV	700/600	N/50 mm	± 20 %
Maximum tensile force L/T	EN 12311-1	MDV	800/700	N/50 mm	± 20 %
Elongation at break L/T	EN 12311-1	MDV	40/40	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	1250	mm	≥
Resistance to static loading	EN 12730	MLV	20	Kg	≥
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/250	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.5/0.5	%	≤
Flexibility at low temperature	EN 1109	MLV	-15	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Loss of mineral	EN 12039	MDV	30	%	≤
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





StressPly Flex Plus

PRODUCT DESCRIPTION

StressPly Flex Plus is a high strength, polyester reinforced, SBS modified roofing membrane designed to be used in torching applications. The membrane offers not only high strength, but also a high percentage of quality blended Styrene- Butadiene-Styrene (SBS) rubber compound. StressPly Flex Plus incorporates a burn-off PE film backer to indicate when proper heat is obtained during application.

FEATURES AND BENEFITS

The Best Rubber Technology

StressPly Flex Plus has been formulated using only the highest grade of SBS rubber. The StressPly Flex Plus SBS compound ensures superior low temperature flexibility. Adequate mixing provides proper phase inversion, which optimises the rubber's performance.

Security in Multi-Ply Applications

StressPly Flex Plus is the top component of a multi-ply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems. This unique combination minimises dependence on perfect workmanship, contact adhesive seaming, etc.

Superior Strength

The StressPly Flex Plus membrane is reinforced with high strength polyester. The superior strength provided by the polyester scrim resists the movement created by today's modern buildings. In addition, the polyester scrim in StressPly Flex Plus provides tensile strength in excess of 800 Newtons in the machine and cross machine direction. This translates to long-term resistance to splits and tears in the completed StressPly Flex roof system.

USES

StressPly Flex Plus can be used in conjunction with other Garland High Performance Roofing products and underlays. Specifications for torch applied roofing systems are available. It can also be used to repair splits; cracks or other deteriorated areas of existing asphalt based roofing systems.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 100mm on the sides and 150mm at the head laps so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Reinforced and stabilized non-woven polyester mat.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: coloured slate granules.

Lower side: PE film.

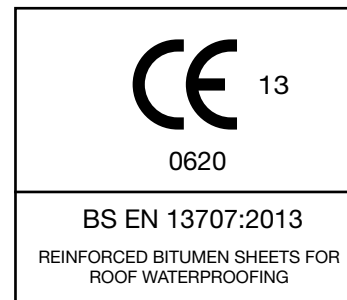
Laying method:

For lower side finishing with polymeric films: Propane-gas light flame

StressPly Flex Plus

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	5	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1848-1	MDV	5.6	mm	± 10%
Weight	EN 1848-1	MLV	6.5	Kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	PASS	100	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 N
Shear resistance of joint	EN 12317-1	MDV	250/120	N/50 mm	± 20 %
Maximum tensile force	EN 12311-1	MDV	900/800	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	45/55	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	-	mm	
Resistance to static loading	EN 12730	MLV	-	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/300	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.2/0.2	%	
Flexibility at low temperature	EN 1109	MLV	-25	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Softening point of bitumen	ASTM D36	MDV	130	°C	
Water vapor transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





StressPly Flex

PRODUCT DESCRIPTION

StressPly Flex is a high strength, polyester reinforced, SBS modified roofing membrane designed to be used in torching applications. The membrane offers not only high strength, but also a high percentage of quality blended Styrene-Butadiene-Styrene (SBS) rubber compound. StressPly Flex incorporates a burn-off PE film backer to indicate when proper heat is obtained during application.

FEATURES AND BENEFITS

The Best Rubber Technology

StressPly Flex has been formulated using only the highest grade of SBS rubber. The StressPly Flex SBS compound ensures superior low temperature flexibility. Adequate mixing provides proper phase inversion, which optimises the rubber's performance.

Security in Multi-Ply Applications

StressPly Flex is the top component of a multi-ply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems. This unique combination minimises dependence on perfect workmanship, contact adhesive seaming, etc.

Superior Strength

The StressPly Flex membrane is reinforced with high strength polyester. The superior strength provided by the polyester scrim resists the movement created by today's modern buildings. In addition, the polyester scrim in StressPly Flex provides tensile strength in excess of 1000 Newtons in the machine and cross machine direction. This translates to long-term resistance to splits and tears in the completed StressPly Flex roof system.

USES

StressPly Flex can be used in conjunction with other Garland High Performance Roofing products and underlays. Specifications for torch applied roofing systems are available. It can also be used to repair splits; cracks or other deteriorated areas of existing asphalt based roofing systems.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 100mm on the sides and 150mm at the head laps so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Reinforced and stabilized non-woven polyester mat.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: coloured slate granules.

Lower side: PE film.

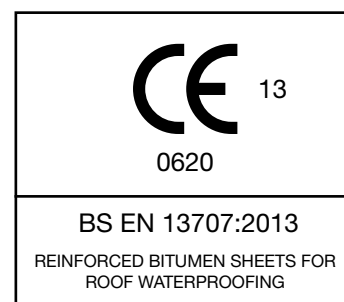
Laying method:

For lower side finishing with polymeric films: Propane-gas light flame

StressPly Flex

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	7.5	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	4.2	mm	± 10%
Weight	EN 1849-1	MLV	5.5	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	100	kPa	
External fire performance	EN 13501-5	MDV	F _{ROOF}	-	-
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 N
Shear resistance of joint	EN 12317-1	MDV	250/120	N/50 mm	± 20 %
Maximum tensile force	EN 12311-1	MDV	1000/1000	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	40/40	%	± 15 %
Resistance to impact	EN 12691 Method A	MLV	1000	mm	
Resistance to static loading	EN 12730	MLV	20	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	450	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.3/0.3	%	
Flexibility at low temperature	EN 1109	MLV	-20	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Softening point of bitumen	ASTM D36	MDV	120	°C	
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





StressPly Flex SA

PRODUCT DESCRIPTION

StressPly Flex SA is a SBS polymer modified self-adhesive roofing membrane. This membrane is reinforced with non-woven composite polyester fabric stabilised with fibre-glass which provides high mechanical resistance and high dimensional stability. The bottom face of the membrane is coated with a self-adhesive elastomeric compound which adheres via pressure to the laying surface. This face is protected by a silicone release film which is removed during the application process. The upper face of the membrane is protected by mineral slates excluding one side lap, which is covered by a strip of silicone release film.

StressPly Flex SA is designed to offer the security of traditional torch applied membrane at critical areas in the contraction of the waterproofing flat roofs. The laps are one such critical areas and these can be either torch sealed or hot air welded to guarantee watertightness. The bottom face of the side lap is covered with a polypropylene textured fabric allowing for a partial self-adhesive bond of the membrane, this feature allows flame to be used to seal the laps and not risk burning heat sensitive insulation board or other materials.

FEATURES AND BENEFITS

The Best Rubber Technology

StressPly Flex SA has been formulated using only the highest grade of SBS rubber. The StressPly Flex SA SBS compound ensures superior low temperature flexibility. Adequate mixing provides proper phase inversion, which optimises the rubber's performance.

Security in Multi-Ply Applications

StressPly Flex SA is the top component of a multi-ply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems.

Safer

The StressPly Flex SA membrane is designed to be applied without using a naked flame and is therefore inherently safer than traditional torch applied membranes where there is a risk of causing fire within sensitive roof details.

USES

StressPly Flex SA should be used in conjunction with Garland's SA Flex Base Sheet as a two layer waterproofing system. This system can be applied over wood, concrete or foil faced insulation board.

APPLICATION INSTRUCTIONS

Position the roll in place and remove the silicone-coated film from the underside of the membrane, simply overlap the sheets at the side by at least 8 cm and 2 cm beyond the non-slatted area on the upper surface. Ensure to press the overlap area very carefully so that the self-adhesive 2 cm strip on the lower face is met, this will act as a flame barrier seal for the subsequent hot air sealing method of the remaining 6 cm. By doing this the thermal insulation or underling substrate is not damaged by the high temperatures of the hot air welder or flame.

The head laps should be hot air welded and overlapped by at least 15 cm.

Note - StressPly Flex SA should not be applied in temperatures below 5°C. At temperatures below 10°C careful attention needs to be paid to ensure a good bond of the self-adhesive agent to the underlying surface or membrane. This may require gentle heating of the membrane using heating appliances or a very light flame if necessary.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven composite polyester stabilised with fibreglass

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

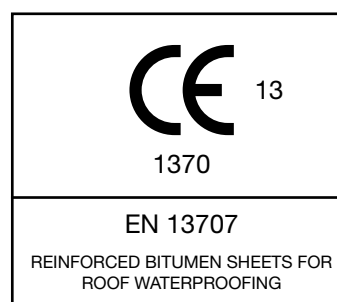
Surface finishing:

Upper side: Slate granules.
Lower side: Silicone release film.

StressPly Flex SA

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	≥
Width	EN 1848-1	MLV	1	m	≥
Mass per unit area	EN 1849-1	MDV	4.0	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	≥
External fire performance	ENV 1187	In accordance with EN 13501-5	F _{roof}	-	
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	NPD	N/50 mm	-20 N
Shear resistance of joint	EN 12317-1	MDV	600/400	N/50 mm	-20 %
Maximum tensile force	EN 12311-1	MDV	700/500	N/50 mm	-20 %
Elongation	EN 12311-1	MDV	40/45	%	-15 V.A.
Resistance to impact	EN 12691	MLV	1250	mm	
Resistance to static loading	EN 12730	MLV	15	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/200	N	-20 %
Dimensional stability	EN 1107-1	MLV	-0.3 / 0.1	%	≤
Flexibility at low temperature	EN 1109	MLV	-25	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	≥
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.



StressPly[®] Signature

PRODUCT DESCRIPTION

StressPly Signature is a superior performing modified bitumen membrane with dual-compound technology. The middle and upper surface is formulated with APP modifiers offering excellent UV resistance, durable impact and marking capabilities. The lower surface is formulated with SBS modifiers which allows for ease of application with low-melt properties and extreme cold bending flexibility. The membrane has superior tensile strength, offering in excess of 1200 N/50mm in the machine direction, utilising a composite polyester/fibreglass reinforcement. The cold bending performance of the membrane is the highest we currently offer and performs to the current standards down to -30 degrees Celsius.

MATERIAL

APP/SBS modified bitumen reinforced with a composite polyester/fibreglass scrim.

PRODUCT ADVANTAGES

- Permanently weather-resistant
- High UV resistance
- Superior strength
- Extreme low temperature flexibility
- Quick and easy installation due to low-melt SBS lower surface
- Non-marking and durable during install

Modifier Technology

StressPly Signature has been formulated using only the highest grade of SBS and APP modifiers. The StressPly Signature compound ensures superior low temperature flexibility and UV resistance for long-term performance.

Security in Multi-Ply Application

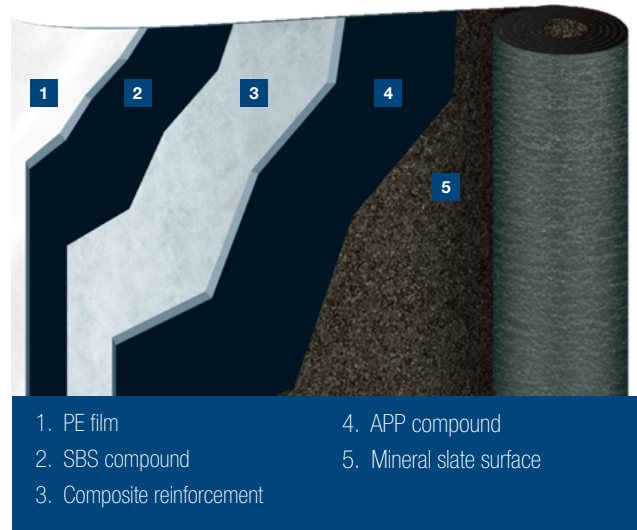
StressPly Signature is the top component of a multi-ply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems. This unique combination maximises roof performance and long-term waterproofing capability.

Superior Strength

The StressPly Signature membrane is reinforced with a composite high strength polyester and fibreglass scrim. This superior strength resists the movement created by today's modern buildings. In addition, the composite scrim in StressPly Signature provides tensile strength in excess of 1200 Newtons in the machine direction. This translates to long-term resistance to splits and tears in the completed StressPly Signature roofing system.

USES

Used as part of a multi-ply modified bituminous waterproofing system for flat roof installation. StressPly Signature can be used in conjunction with other Garland high performance roofing membranes and underlays.



5 x 1 m - 30 rolls per pallet - 30 kg/roll

COLOURS

Charcoal, Brown, Green

STORAGE

Rolls should be stored up-right in cool conditions and out of direct sunlight. Never lay the rolls on their side.

APPLICATION INSTRUCTIONS

The substrate should be clean, smooth and dry. For a better adhesion it may be previously treated with Garland Garla- Prime. The membrane is then laid by melting the lower side with a propane gas flame. Edges shall be overlapped, always by torch, by at least 75mm on the sides and 150mm on top so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Composite polyester/fibreglass mat.

Compound type:

Bitumen modified with styrene-butadiene-styrene rubber (SBS) and atactic polypropylene (APP).

Surface finishing:

Upper side: coloured slate granules.
Lower side: polyethylene film.

Laying method:

Propane-gas lit flame.

ROLL SIZE & PACKAGING

The Garland Company UK Limited

StressPly® Signature

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Compound type			SBS/APP		
Reinforcement type			Composite		
Upper surface finish			Mineral Slate		
Lower surface finish			PE Film		
Length	EN 1848-1	MLV	5	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	5.5	mm	± 10%
Weight	EN 1849-1	MLV	6.0	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	F	-	
Resistance to fire	EN 13501-5	MDV	F ROOF		
Shear resistance of joint	EN 12317-1	MDV	1100/900	N/50 mm	± 20 %
Maximum tensile force L/T	EN 12311-1	MDV	1200/1000	N/50 mm	± 20 %
Elongation at break L/T	EN 12311-1	MDV	40/40	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	1750	mm	≥
Resistance to static loading	EN 12730	MLV	25	Kg	≥
Resistance to tearing (nail shank)	EN 12310-1	MDV	250/250	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.3/0.3	%	≤
Flexibility at low temperature	EN 1109	MLV	-30	°C	
Flow resistance at elevated temperature	EN 1110	MLV	120	°C	
Loss of mineral	EN 12039	MDV	30	%	≤
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





UNDERLAYMENTS



Torch Evolution Base



PRODUCT DESCRIPTION

Torch Evolution Base membrane is an elastomeric modified bitumen waterproofing membrane manufactured in a superior calendaring process by saturating and coating a polyester carrier with a waterproofing compound made from special grade of modified bitumen with SBS elastomers and fillers. The SBS modifiers boost the thermal, mechanical and aging characteristics of the membrane compound; the non-woven spun-bond polyester carrier reinforcement provides the membrane with its excellent tensile strength, tear/puncture resistance and elongation properties. Torch Evolution upper and lower surface is finished with laminated with thermofusible polyethylene film.

FEATURES AND BENEFITS

Suitable for Above and Below Grade

Torch Evolution Base is commonly used above grade on roofing structures but it is just as suitable for below grade applications such as foundations and underground structures.

Excellent Chemical and Bacteria Resistance

The special grade of modified bitumen used in the manufacturing of Torch Evolution Base has excellent resistance to alkaline solutions, light acidic solutions and bacteria.

Superior Strength

The Torch Evolution Base membrane is reinforced with high strength polyester. The superior strength provided by the polyester scrim resists the movement created by today's modern buildings. In addition, the polyester scrim in Torch Evolution Base provides tensile strength in excess of 850 Newtons longitudinally. This translates to long-term resistance to splits and tears in the completed Evolution roof system.

Absolute Impermeability to Water

The exceptional formulation of Torch Evolution Base means that the membrane is impermeable to water, coupled with the excellent thermal, mechanical and ageing characteristics Torch Evolution in combination with the StressPly cap sheet really is a waterproofing solution you can rely on.

USES

Torch Evolution Base can be used in conjunction with other Garland High Performance Roofing products, as well as with conventional polyester felt underlayment. Specifications for torch applied roofing systems are available. It can also be used to repair splits, cracks or other deteriorated areas of an existing asphalt based roofing system.

APPLICATION INSTRUCTIONS

- The substrate surface should be clean, dry, smooth and free from any irregularities & dust.
- For a better adhesion it may be treated with a bituminous primer like Garland Garla-Prime.
- Torch Evolution Base is installed by using propane torch welding and fully or partially bonding the membrane to the substrate depending on the waterproofing system design requirements.
- For fully bonded systems, the membranes should be installed with propane torch and exposing the lower surface to the flame till the polyethylene film burns and the bituminous mass starts melting creating a heat weld between the membrane and the substrate.
- For sloping roofs, the membrane should be laid from the lower point of the roof with longitudinal direction of rolls perpendicular to slope direction.
- Edges shall be overlapped, always by torch, by at least 100 mm on the sides and 150 mm on the end lap so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven polyester reinforcement, reinforced with fibre glass filaments (composite).

Compound type:

Bitumen modified with elastomeric rubber (SBS).

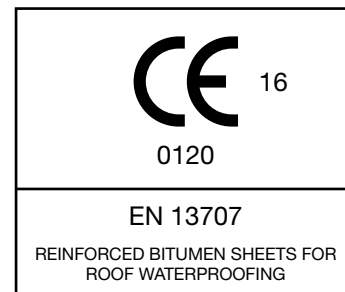
Surface finishing:

Upper side: Polyethylene Film
Lower side: Polyethylene Film

Torch Evolution Base

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Compound type			SBS		
Reinforcement type			Reinforced Polyester		
Upper surface finish			PE Film		
Lower surface finish			PE Film		
Length	EN 1848-1	MLV	8	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	4.0	mm	± 10%
Weight	EN 1849-1	MLV	-	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	F	-	
Resistance to fire	EN 13501-5	MDV	F ROOF		
Shear resistance of joint	EN 12317-1	MDV	750/550	N/50 mm	± 20 %
Maximum tensile force L/T	EN 12311-1	MDV	850/650	N/50 mm	± 20 %
Elongation at break L/T	EN 12311-1	MDV	40/40	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	1250	mm	≥
Resistance to static loading	EN 12730	MLV	20	Kg	≥
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/200	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.3/0.3	%	≤
Flexibility at low temperature	EN 1109	MLV	-15	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Loss of mineral	EN 12039	MDV	N/A	%	≤
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





SA Flex Base Sheet

PRODUCT DESCRIPTION

SA Flex Base Sheet is a SBS polymer modified self-adhesive roofing membrane. This membrane is reinforced with non-woven composite polyester fabric stabilised with fibreglass which provides high mechanical resistance and high dimensional stability. The bottom face of the membrane is coated with a self-adhesive elastomeric compound which adheres via pressure to the laying surface. This face is protected by a silicone release film which is removed during the application process. The upper face of the membrane is covered with a polyethylene film.

SA Flex base Sheet is designed to offer the waterproofing security of traditional torch applied membranes when flame or hot works are either not allowed or will be a fire risk. The membranes laps feature a self-adhesive compound covered in a protective strip of silicone release film, this allows the laps to be sealed without the need for flame and does not risk burning heat sensitive insulation board or other materials.

FEATURES AND BENEFITS

The Best Rubber Technology

SA Flex Base Sheet has been formulated using only the highest grade of SBS rubber. The SBS compound ensures superior low temperature flexibility. Adequate mixing provides proper phase inversion, which optimises the rubber's performance.

Security in Multi-Ply Applications

SA Flex Base Sheet is the underlay component of a multiply roofing system. It combines the inherent advantages and proven performance of multi-ply protection with the strength, flexibility and elongation of elastomeric systems.

Safer

The SA Flex Base Sheet is designed to be applied without using a naked flame and is therefore inherently safer than traditional torch applied membranes where there is a risk of causing fire within sensitive roof details.

USES

SA Flex base Sheet should be used in conjunction with Garland's StressPly® Flex SA as a two layer waterproofing system. This system can be applied over wood, concrete or foil faced insulation board.

APPLICATION INSTRUCTIONS

The substrate should be clean, dry, free of debris and dust. Porous materials such as concrete, wood, brick etc. should be primed with Garland's Garla-Prime bituminous primer prior to application. During low temperatures or on particularly difficult substrates the area must be first primed with Garland's SA Contact Primer prior to application. It is not necessary to use a primer on foil face insulation board. If in doubt you must consult your Garland Regional Technical Representative or contact the technical department.

Position the roll in place and remove the silicone-coated film from the underside of the membrane, simply overlap the sheets at the side by at least 10 cm and press with a weighted roller to ensure good adhesion. If necessary use hot-air welding equipment to ensure a watertight seal.

The head laps should be hot-air welded and overlapped by at least 150 mm.

Note - SA Flex Base Sheet should not be applied in temperatures below 5°C. At temperatures below 10°C careful attention needs to be paid to ensure a good bond of the self adhesive agent to the substrate and the SA Contact Primer must be used in these instances.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven composite polyester stabilised with fibreglass

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: Polyethylene film.

Lower side: Silicone release film.

SA Flex Base Sheet

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	3.0	mm	±
Watertightness	EN 1928:2000 Method B	PASS	60	kPa	≥
External fire performance	ENV 1187	In accordance with EN 13501-5	F _{roof}	-	
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	-20 N
Shear resistance of joint	EN 12317-1	MDV	350/300	N/50 mm	-20 %
Maximum tensile force	EN 12311-1	MDV	450/400	N/50 mm	-20 %
Elongation	EN 12311-1	MDV	40/40	%	-15 V.A
Resistance to impact	EN 12691 Method A	MLV	800	mm	
Resistance to static loading	EN 12730	MLV	10	kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	130/130	N	-20 %
Dimensional stability	EN 1107-1	MLV	-	%	≤
Flexibility at low temperature	EN 1109	MLV	-25	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	≥
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.



Torch Flex Ultra-Vent

PRODUCT DESCRIPTION

Torch Flex Ultra-Vent is a high performance torch applied underlay, utilising adhesive strips on the underside, which allow for trapped vapour to disperse throughout the roof system.

FEATURES AND BENEFITS

Torch Flex Ultra-Vent has been developed to combine modern polymer technology with proven roof design for torch applications.

Torch Flex Ultra-Vent is a high performance torch base sheet, which utilises elasto-plastomer low melting adhesive stripes on the underside that when bonded to the top of the insulation boards, allow any trapped vapour to evenly disperse throughout the Ultra-Vent underlay membrane, therefore eliminating the build up of pressure within the system which would otherwise ultimately creating a blister.

The unique adhesive qualities of the thermo-plastic bitumen strips also ensure bonding qualities equal to that of a traditional roofing system using conventional venting underlays.

The underside of the membrane is coated with a light burn off backer, which identifies the correct application temperature to the installer; therefore leaving the areas between the thermo-plastic adhesive clear of any bitumen or bleed out, allowing the sheet to 'breathe' or vent. By using Garland's Torch Flex Ultra Bond metal lined vapour barrier in conjunction with Torch Flex Ultra-Vent and StressPly® membranes we are able to create a roof system that has a reduced installation cost but does not compromise the quality and life expectancy of the completed system. Torch Flex Ultra-Vent is reinforced with a high strength polyester scrim, which adds strength to the completed system.

USES

The Torch Flex Ultra-Vent membrane is designed for use as under-layer vapour dispersion membrane.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated with Garland Garla-Prime. The membrane is then laid by heating the lower side with light propane gas flame.

Edges shall be overlapped, always by propane-gas lit flame, by at least 75mm on the side laps and 100mm on head laps so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager

TECHNICAL DATA

Reinforcement type:

Reinforced and stabilized non-woven polyester mat.

Compound type:

Bitumen modified with thermo-plastic rubber (SBS).

Surface finishing:

Upper side: PE film.

Lower side: PE film.

Laying method:

For lower side finishing with polymeric films: Propane-gas lit flame.

Torch Flex Ultra-Vent

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	8	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	3	mm	± 10%
Weight	EN 1849-1	MDV	4.75	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	100	kPa	≥
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 N
Shear resistance of joint	EN 12317-1	MDV	250/120	N/50 mm	± 20 %
Maximum tensile force	EN 12311-1	MDV	900/700	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	45/55	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	-	mm	
Resistance to static loading	EN 12730	MLV	-	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	150/150	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.2/0.2	%	≤
Flexibility at low temperature	EN 1109	MLV	-20	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	110	°C	≥
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	20,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





Torch Evolution VCL/Carrier

PRODUCT DESCRIPTION

Torch Evolution VCL/Carrier Membrane utilises SBS polymers. These allow the membrane to be flexible in cold weather conditions yet remain elastic over the life time of the roof. This membrane is reinforced with polyester which provides the membrane with its excellent tensile strength, tear/puncture resistance and elongation properties. The upper face is finished with a new multipurpose polypropylene textured fabric which is ideally suited to receive liquid coating products such as Garland's White-Knight system or adhesives used to bond insulation. This upper surface can also be melted by flame so conventional torch-based application methods can be used.

FEATURES AND BENEFITS

- Strong and Elastic
- Coating receptive upper faced fabric
- Designed to prevent high humidity air saturated with moisture from entering the roof system and causing issues with thermal efficiency of the insulation and blistering of the waterproofing membranes.

USES

The membrane has been specifically designed as a carrier layer for Garland's polyurethane liquid coating systems such as White-Knight. This membrane provides a new surface for such applications where the existing substrate is in poor condition or an intermediate layer of waterproofing is required. The membrane can also be used as a vapour check as the upper fabric surface provides good bond between Garland's Insu-Lock adhesive and the insulation boards used.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 100 mm on the sides and 150 mm on top so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven polyester reinforcement, reinforced with fibre glass filaments (composite).

Compound type:

SBS

Surface finishing:

Upper side: Textured polypropylene fabric
Lower side: Polyethylene film.

Laying method:

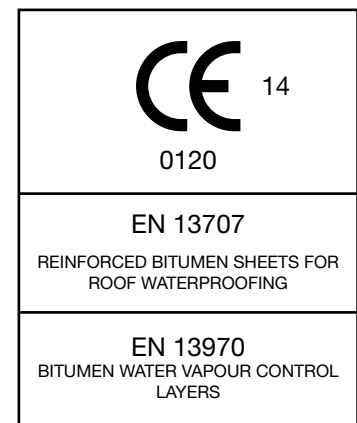
Lower side finishing: Propane-gas flame.

Upper Side finishing: hot/cold glues.

Torch Evolution VCL/Carrier

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	3	mm	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	≥
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass F	-	-
External fire performance	EN 13501-5		Froof	-	-
Shear resistance of joint	EN 12317-1	MDV	500/300	N/50 mm	-20 %
Maximum tensile force	EN 12311-1	MDV	600/400	N/50 mm	-20 %
Resistance to impact	EN 12691 Method A	MLV	900	mm	-
Elongation at break L/T	EN 12311-1	MDV	35/35	%	-15 ass.
Resistance to tearing (nail shank)	EN 12310-1	MDV	140/140	N	-20 %
Flexibility at low temperature	EN 1109	MLV	-20	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	110	°C	≥
Water vapour transmission after ageing	EN 1296 / 1931	μ = MDV or 20,000	20,000	-	-
Dangerous substances	-	See Note A			
Note A	This product does not contain asbestos, tar or any dangerous substance and consequently it is not subject to the production of a safety data sheet.				

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





SA Flex Carrier Membrane

PRODUCT DESCRIPTION

SA Flex Carrier Membrane is a SBS polymer modified self-adhesive roofing membrane. The membrane is strengthened with longitudinally reinforced, rot-proof fibreglass reinforcement with high dimensional stability. The bottom face of the membrane is coated with a self-adhesive elastomeric compound which adheres via pressure to the laying surface. This face is protected by a silicone release film which is removed during the application process. The upper face of the membrane is covered with a polypropylene textured film which promotes adhesion to urethane coatings and adhesives used to bond insulation.

SA Flex Carrier Membrane is designed to offer the performance of traditional torch applied membranes when flame or hot works are either not allowed or will be a fire risk. The membranes laps feature a self-adhesive compound covered in a protective strip of silicone release film, this allows the laps to be sealed without the need for flame and does not risk burning heat sensitive insulation board or other materials.

The SA Flex Carrier Membrane is used as a self-adhesive carrier layer for our White-Knight cold applied liquid system in a no-flame environment. This membrane can also be used as vapour check prior to the installation of thermal insulation.

FEATURES AND BENEFITS

Multipurpose

The membrane can be used as a carrier layer for Garland's White-Knight cold applied liquid roofing system. Or as a vapour check layer before bonding thermal insulation to its upper surface.

Safer

The SA Flex Carrier Membrane is designed to be applied without using a naked flame and is therefore inherently safer than traditional torch applied membranes where there is a risk of causing fire within sensitive roof details.

USES

SA Flex Carrier Membrane can be applied over wood, metal, concrete or foil faced insulation board.

APPLICATION INSTRUCTIONS

The substrate should be clean, dry, free of debris and dust. Porous materials such as concrete, wood, brick etc. should be primed with Garland's Garla-Prime bituminous primer prior to application. During low temperatures or on particularly difficult substrates the area must be first primed with Garland's SA Contact Primer prior to application. It is not necessary to use a primer on foil face insulation board. If in doubt you must consult your Garland Regional Technical Representative or contact the technical department.

Position the roll in place and remove the silicone-coated film from the underside of the membrane, simply overlap the sheets at the side by at least 75mm and press with a weighted roller to ensure good adhesion. If necessary use hot-air welding equipment to ensure a watertight seal.

The head laps should be hot-air welded and overlapped by at least 100mm.

Note - SA Flex Carrier Membrane should not be applied in temperatures below 5°C. At temperatures below 10°C careful attention needs to be paid to ensure a good bond of the self-adhesive agent to the substrate and the SA Contact Primer must be used in these instances.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Fibreglass

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

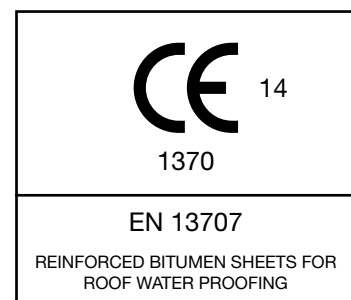
Upper side: polypropylene textured film.

Lower side: Silicone release film with self-adhesive elastomeric compound.

SA Flex Carrier Membrane

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	15	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	2.5	mm	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	≥
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	-
External fire performance	EN 13501-5		Froof		
Shear resistance of joint	EN 12317-1	MDV	150/100	N/50 mm	-20 %
Maximum tensile force	EN 12311-1	MDV	300/200	N/50 mm	-20 %
Resistance to impact	EN 12691 Method A	MLV	NPD	mm	-
Resistance to tearing (nail shank)	EN 12310-1	MDV	70/70	N	-20 %
Flexibility at low temperature	EN 1109	MLV	-25	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	≥
Water vapour transmission after ageing	EN 1296 / 1931	MDV	NPD	-	-
Dangerous substances	-	See Note A			
Note A	This product does not contain asbestos, tar or any dangerous substance and consequently it is not subject to the production of a safety data sheet.				

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





VAPOUR CONTROL LAYERS



Torch Flex Vapour Barrier

PRODUCT DESCRIPTION

Torch Flex Vapour Barrier is a Styrene-Butadiene-Styrene (SBS) modified metal lined membrane design to stop water vapour from entering the roof system causing condensation.

FEATURES AND BENEFITS

High-Tech Formulation

The Torch Flex Vapour Barrier has a high percentage of SBS rubber which when fused together with the torch applied membrane gives the system superior puncture and abrasion resistance. It also has high tensile and elongation characteristics.

Eliminates the Use of the 2 Ply Underlayment

Because the Torch Flex Vapour Barrier is 3.0 mm thick, one ply will be sufficient as the underlayment for torch applied membrane.

Superior Strength

The Torch Flex Vapour Barrier membrane is reinforced with a dual fibreglass scrim. The superior strength provided by this reinforcement resists the movement created by today's modern buildings and has excellent dimensional stability.

Advanced Rubber Technology

When the SBS rubber is properly dispersed throughout the high penetration asphalt, the rubber provides increased thermal shock resistance, UV protection, heat resistance, elongation, and low temperature flexibility. To ensure proper dispersion, a special high shear mixer is used in manufacturing.

USES

Torch Flex Vapour Barrier is used as the underlayment ply for any of Garland's torch-applied membranes where you wish to prevent water vapour from entering the roof system. It is fully compatible with SBS modified membranes.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 75mm on the sides and 100mm at the head laps so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Reinforced and stabilized non-woven polyester mat.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: Textured polypropylene film.

Lower side: PE film.

Laying method:

For lower side finishing with polymeric films: Propane-gas light flame

Torch Flex Vapour Barrier

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	3	mm	± 10%
Weight	EN 1849-1	MLV	4	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass F	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 N
Maximum tensile force	EN 12311-1	MDV	1200/1200	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	4/4	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	-	mm	
Resistance to static loading	EN 12730	MLV	-	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/200	N	± 10 %
Dimensional stability	EN 1107-1	MLV	NPD	%	
Flexibility at low temperature	EN 1109	MLV	-20	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Softening point of bitumen	ASTM D36	MDV	130	°C	
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	1500000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.



Torch Evolution VCL

PRODUCT DESCRIPTION

Torch Evolution VCL/Carrier Membrane utilises SBS polymers. These allow the membrane to be flexible in cold weather conditions yet remain elastic over the life time of the roof. This membrane is reinforced with polyester which provides the membrane with its excellent tensile strength, tear/puncture resistance and elongation properties. The upper face is finished with a new multipurpose polypropylene textured fabric which is ideally suited to receive liquid coating products such as Garland's White-Knight system or adhesives used to bond insulation. This upper surface can also be melted by flame so conventional torch-based application methods can be used.

FEATURES AND BENEFITS

- Strong and Elastic
- Coating receptive upper faced fabric
- Designed to prevent high humidity air saturated with moisture from entering the roof system and causing issues with thermal efficiency of the insulation and blistering of the waterproofing membranes.

USES

The membrane has been specifically designed as a carrier layer for Garland's polyurethane liquid coating systems such as White-Knight. This membrane provides a new surface for such applications where the existing substrate is in poor condition or an intermediate layer of waterproofing is required. The membrane can also be used as a vapour check as the upper fabric surface provides good bond between Garland's Insu-Lock adhesive and the insulation boards used.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 100 mm on the sides and 150 mm on top so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Non-woven polyester reinforcement, reinforced with fibre glass filaments (composite).

Compound type:

SBS

Surface finishing:

Upper side: Textured polypropylene fabric
Lower side: Polyethylene film.

Laying method:

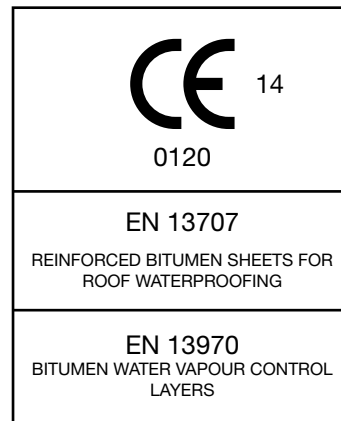
Lower side finishing: Propane-gas flame.

Upper Side finishing: hot/cold glues.

Torch Evolution VCL

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	3	mm	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	≥
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass F	-	-
External fire performance	EN 13501-5		Froof		
Shear resistance of joint	EN 12317-1	MDV	500/300	N/50 mm	-20 %
Maximum tensile force	EN 12311-1	MDV	600/400	N/50 mm	-20 %
Resistance to impact	EN 12691 Method A	MLV	900	mm	-
Elongation at break L/T	EN 12311-1	MDV	35/35	%	-15 ass.
Resistance to tearing (nail shank)	EN 12310-1	MDV	140/140	N	-20 %
Flexibility at low temperature	EN 1109	MLV	-20	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	110	°C	≥
Water vapour transmission after ageing	EN 1296 / 1931	μ = MDV or 20,000	20,000	-	-
Dangerous substances	-	See Note A			
Note A	This product does not contain asbestos, tar or any dangerous substance and consequently it is not subject to the production of a safety data sheet.				

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.





Torch Flex Ultra Bond

PRODUCT DESCRIPTION

Torch Flex Ultra-Bond is a vapour barrier designed to solve the problem where insulation boards must be bonded without using bitumen or an adhesive.

The top face of the membrane consist of a thermoplastic adhesive, which melts quickly when torched and forms a strong bond with the insulation panels pressed on to the membrane. The top face of a normal vapour barrier membrane has a layer of bitumen covering the reinforcement, which is no more than 1 - 1.5 mm thick, while the stripes of Torch Flex Ultra Bond protrude by 3 - 3.5 mm like an adhesive applied with a toothed spatula. Once the flame has softened the adhesive it is easier to level off the prominent zones with the torch, making up for any unevenness in the substrate.

FEATURES AND BENEFITS

Time Saving

With Torch Flex Ultra Bond there will be no more time wasted waiting for cold bond adhesives to set or risks of burns when installing molten bitumen, along with a significant reduction in waste and pollution. The high softening point of the rusticated indentations is over 140 degrees higher than that of oxidised bitumen normally used for bonding insulation panels, along with the high adhesive surface area, which can be obtained (around 40 %) and this guarantees the reliable installation on any slope.

Single Component

With Torch Flex Ultra Bond you do not need other materials, because you have an adhesive and vapour barrier in one single product.

USES

The Torch Flex Ultra Bond membranes is designed for use as under layer vapour barrier.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with Garland Garla-Prime. The membrane is then laid by melting the lower side with light propane gas flame.

Edges shall be overlapped, always by torch, by at least 75mm

on the sides and 100 mm on top so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

Reinforced and stabilised with fibreglass.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: PE / PP polymeric film with quartz sand.

Lower side: aggregate / PE / PP polymeric film, non-stick polymers.

Laying method:

Lower side: Propane-gas light flame

Torch Flex Ultra Bond

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	8	m	≥
Width	EN 1848-1	MLV	1	m	≥
Thickness	EN 1849-1	MDV	2.5	mm	± 10%
Weight	EN 1849-1	MDV	3.3	kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	Pass	60	kPa	≥
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass E	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 N
Shear resistance of joint	EN 12317-1	MDV	250/120	N/50 mm	± 20 %
Maximum tensile force	EN 12311-1	MDV	250/120	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	3/3	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	-	mm	
Resistance to static loading	EN 12730	MLV	-	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	100/100	N	± 10 %
Dimensional stability	EN 1107-1	MLV	-0.3/0.3	%	≤
Flexibility at low temperature	EN 1109	MLV	-15	°C	≤
Flow resistance at elevated temperature	EN 1110	MLV	110	°C	≥
Water vapour transmission properties	EN 1931	μ = MDV or 20,000	1500000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.



SA Flex Vapour Barrier

PRODUCT DESCRIPTION

SA Flex Vapour Barrier is a Styrene-Butadiene-Styrene (SBS) modified metal lined membrane design to stop water vapour from entering the roof system causing condensation.

FEATURES AND BENEFITS

High-Tech Formulation

The SA Flex Vapour Barrier has a high percentage of SBS rubber, high-strength fibre-glass reinforcement and monolithic aluminium foil throughout.

Ultimate Vapour Barrier

The aluminium foil placed within the membrane offers the ultimate in vapour blocking and therefore condensation building up in the roofing system.

Superior Strength

The SA Flex Vapour Barrier membrane is reinforced with a high-strength fibreglass scrim. The superior strength provided by this reinforcement resists the movement created by today's modern buildings and has excellent dimensional stability.

Advanced Rubber Technology

When the SBS rubber is properly dispersed throughout the high penetration asphalt, the rubber provides increased thermal shock resistance, UV protection, heat resistance, elongation, and low temperature flexibility. To ensure proper dispersion, a special high shear mixer is used in manufacturing.

USES

SA Flex Vapour Barrier is used as a VCL layer for any of Garland's torch-applied or self-adhesive membranes where you wish to prevent water vapour from entering the roof system. It is fully compatible with SBS modified membranes.

APPLICATION INSTRUCTIONS

The laying deck shall be clean, smooth and dry. Substrates must be primed with Garland SA Contact Primer prior to application. The membrane is then laid by removing the silicone release film from the lower side of the membrane and laying onto the primed substrate. Edges shall be overlapped, by at least 75mm on the sides and 150mm at the head laps so that waterproofing integrity is maintained.

Refer to specific specifications provided by your Regional Technical Manager.

TECHNICAL DATA

Reinforcement type:

High strength fibre-glass.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: Textured polypropylene film.

Lower side: Adhesive compound.

Laying method:

For lower side finishing with adhesive polymers: Cold application.

SA Flex Vapour Barrier

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	10	m	
Width	EN 1848-1	MLV	1	m	
Thickness	EN 1849-1	MDV	3	mm	± 10%
Weight	EN 1849-1	MDV	4	Kg/m ²	± 10%
Watertightness	EN 1928:2000 Method B	PASS	60	kPa	
Reaction to fire	EN 13501-1	EN 13501-1	Euroclass F	-	
Peel resistance of joint	EN 12316-1	MDV	-	N/50 mm	± 20 %
Maximum tensile force	EN 12311-1	MDV	1200/1200	N/50 mm	± 20 %
Elongation	EN 12311-1	MDV	4/4	%	± 10 %
Resistance to impact	EN 12691 Method A	MLV	-	mm	
Resistance to static loading	EN 12730	MLV	-	Kg	
Resistance to tearing (nail shank)	EN 12310-1	MDV	200/200	N	± 10 %
Dimensional stability	EN 1107-1	MLV	NPD	%	
Flexibility at low temperature	EN 1109	MLV	-20	°C	
Flow resistance at elevated temperature	EN 1110	MLV	100	°C	
Softening point of bitumen	ASTM D36	MDV	130	°C	
Water vapor transmission properties	EN 1931	μ = MDV or 20,000	1,500,000	-	

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.



SA ALU-X

PRODUCT DESCRIPTION

SA ALU-X is a self-adhesive bituminous vapour control layer which is saturated and coated with high quality SBS (Styrene-Butadiene-Styrene) modified bitumen suitable for cold application. The VCL consists of a core glass fibre reinforcement between an aluminium foil layer and a self-adhesive elastomeric compound which adheres, via pressure, to the laying surface.

FEATURES AND BENEFITS

Flame-Free Application

The self-adhesive vapour control layer allows for a fast, flame free application removing the need for torching and associated health and safety risks.

Ultimate Vapour Barrier

Designed to prevent high humidity air saturated with moisture from entering the roof system and causing issues with thermal efficiency of the insulation and blistering of the waterproofing membranes. SA ALU-X is water-resistant including salt solutions, diluted non-oxidising acids and bases.

USES

SA ALU-X can be used for many applications within Garland's product portfolio. It can be used as a vapour control layer within Garland's cold applied products such as Dura-Systems and White Knight. It can also be used as a self-adhesive vapour control layer installed onto a structural deck before the installation of R-MER Metal Systems. In addition SA ALU-X can be applied as a carrier membrane, a night seal or can be used to tape the joints within foil faced insulation when specified within a Garland Dura-Coat system.

APPLICATION INSTRUCTIONS

Prior to the installation of SA ALU-X care should be taken to ensure that the surface is smooth, dry, free of oil, dust or any impurities. be clean, smooth and dry. For best results the membrane should be unrolled and align into position. The film should then be removed simultaneously to the membrane being fixed to the deck.

When being installed to a timber deck within a Garland cold-applied system, a suitable primer must be used such as Garland Quick-Prime or SA Contact Primer.

Please see individual data sheets for coverage rates and application guidelines.

Refer to specific specifications provided by your Regional Technical Manager.

STORAGE

SA ALU-X must be stored in a cool, dry place away from direct sunlight.

TECHNICAL DATA

Reinforcement type:

Glass fibre.

Compound type:

Bitumen modified with thermoplastic rubber (SBS).

Surface finishing:

Upper side: Aluminium foil.

Laying method:

Cold Process Application

SA ALU-X

Characteristic	Test Method	Expression of result	Value	Units	Tolerance
Length	EN 1848-1	MLV	50	m	
Width	EN 1848-1	MLV	1.08	m	
Thickness	EN 1848-1	MDV	0.50	mm	± 10%
Weight	EN 1848-1	MLV	0.50	Kg/m ²	± 10%
Maximum tensile force	EN 12311-1	MDV	600/600	N/50 mm	
Flexibility at low temperature	EN 1109	MLV	-25	°C	
Flow resistance at elevated temperature	EN 12311-1	MLV	90	°C	
Water vapour transmission properties	-		1500	Sd, m	
Reaction to fire	EN 11925-2		Class E According to EN 13501-1		

For specific application recommendations, please contact your regional Garland Technical Manager or the Garland Technical Department.