



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.

