StressPly Evolution *E-401/E-301*

Technical Data Sheet

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

- ✓ High UV Resistance
  - StressPly Evolution with its mineral slate upper finish offers excellent protection from the damaging effects of UV 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 1000 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.

Uses

StressPly Evolution 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 75mm on the sides and 100mm at the head laps so that waterproofing integrity is maintained. For further application information please refer to specific specifications provided by your Garland Technical Manager.

Technical Data

Reinforcement type:	Reinforced and stabilised non-woven polyester mat with fibre glass filaments.
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

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since 1895

Properties	Norms	Unit	Value	Tolerance
Physical Data				
Type of compound			SBS	
Type of reinforcement			Reinforced polyester mat	
Finish upper face			Slate granules	
Finish lower face			PE film	
Length	EN 1848-1	m	6	±1%
Width	EN 1848-1	m	1	±1%
Thickness	EN 1849-1	mm	4.2	±5%
Mechanical Data				
Watertightness	EN 1928	kPa	100	≥
Cold temperature flexibility	EN 1109	°C	-25	≤
Visible defects	EN 1850-1		NO	
Flow resistance	EN 1110	°C	100	≤
Tensile strength L	EN 12311-1	N/5 cm	1000	±20%
Tensile strength T	EN 12311-1	N/5 cm	800	±20%
Elongation at break L	EN12311-1	%	40	±15 ABS
Elongation at break T	EN 12311-1	%	40	±15 ABS
Nail tear strength L	EN12310-1	N	450	±10%
Nail tear strength T	EN12310-1	N	450	±10%
Static puncture resistance	EN 12730	kg	20	≥
Shear strength joints	EN 12317-1	N/5 cm	800 / 700	±20%
Fire Performance				
Fire resistance	EN 13501-5		$B_{ROOF(t4)}$	
Fire reaction	EN 13501-1		E	
Application Data				
Minimum application temp		°C	5	
Minimum slope		%	1.5	

If you require any further information please contact your local Garland Technical Manager.

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