Torch Evolution Base *E-201*

Technical Data Sheet

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 thermo-fusible polyethylene film.

Features:

- ✓ 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.

Technical Data

Reinforcement type:	Non-woven polyester reinforcement with fibre glass filaments
Compound type:	Bitumen modified with thermoplastic rubber (SBS)
Surface finishing:	Upper side: Polyethylene film
Lower side:	Polyethylene film
Laying method:	Propane gas light flame

Garland UK
Second Way Centre, Second Way,
Bristol, BS11 8DF
+44 (0)1174 401050
info@garlandukltd.co.uk
www.garlandukltd.co.uk

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since 1895

Properties	Norms	Unit	Value	Tolerance
Physical Data				
Type of compound			SBS	
Type of reinforcement			Reinforced polyester	
Finish upper face			PE film	
Finish lower face			PE film	
Length	EN 1848-1	m	8	±1%
Width	EN 1848-1	m	1	±1%
Thickness	EN 1849-1	mm	4.0	±10%
Weight	EN 1849-1	kg/m^2	-	±10%
Mechanical Data				
Watertightness	EN 1928	kPa	60	≥
Cold temperature flexibility	EN 1109	°C	-15	≤
Visible defects	EN 1850-1		NO	
Flow resistance	EN 1110	°C	100	≤
Tensile strength L/T	EN 12311-1	N/50mm	850/650	±20%
Shear resistance of joint L/T	EN 12317-1	N/50mm	750/550	±20N
Elongation at break L/T	EN12311-1	%	40/40	±15 ABS
Nail tear strength L/T	EN12310-1	N	200/200	±30%
Dimensional stability	EN 1107-1	N	-	≤
Static puncture resistance	EN 12730	kg	20	≥
Dynamic puncture resistance	EN 12691	mm	1250	≥
Flow resistance at high temp	EN 1110	°C	100	
Softening point of bitumen	ASTM D36	°C		
Fire Performance				
Fire resistance	EN 13501-5		B_{ROOF}(t4)	
Fire reaction	EN 13501-1		F	

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

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