



TREMguard LLM

Smooth Back TPO Membrane

DESCRIPTION

TREMguard LLM Thermoplastic Polyolefin (TPO) Waterproof Membrane is a flexible waterproof sheet. Using the latest manufacturing technology and processing techniques, the membrane uses thermoplastic polyolefin (TPO) material as the base material, which combines both the durability of ethylene propylene rubber and the weldability of polypropylene.

BASIC USES

- Various roofing waterproof projects, such as industrial and civil buildings, commercial buildings.
- Mechanically fixed roofing systems.

BENEFITS

- Excellent durability, tear and puncture resistance.
- Weather resistance.
- Excellent long-term flexibility.
- Embedded polyester mesh fabric for high tensile strength, fatigue resistance and puncture resistance. Suitable for mechanically attached roofing systems.
- Excellent high and low temperature resistance. Remains flexible at -50° C and retains mechanical strength at high temperature.
- Excellent chemical resistance to acids, bases, and building vent exhaust emissions.
- White colour and smooth surface gives high solar reflectivity and reduced dirt pick up.
- Excellent dimensional stability.
- Heat welding yields tightly bonded, fully sealed seams.

ROLL SIZE & MEMBRANE THICKNESS

TPO Thickness	Roll Size
1.2mm	2m x 25m
1.5mm	2m x 25m
1.8mm	2m x 25m
2.0mm	2m x 20m

INSTALLATION

For Mechanically Attached Roofing System

- Before application, spread TREMguard LLM membranes on substrate in advance.
- Install TREMguard LLM membranes perpendicular to steel deck ribs on the substrate without distortions according to the flange.
- The overlapping width is 120 mm or 150mm. The minimum overlapping distance of membrane short side direction is 75 mm.
- Fasteners are installed according to designed position.
- Hot-air welding is adopted for laps with 40 mm welding width.

CAUTION

- TREMguard LLM membranes reflect heat and light, wearing protective clothing (long-sleeved shirt, long trousers), and wearing sunscreen to protect the skin is recommended. UV protective glasses should also be worn.
- Security measures for roof perimeter are necessary during application. Sheet surface is slippery when wet, take care to avoid slipping.
- Sealants and adhesives are flammable and contain solvents. They pose a fire danger when exposed to heat or open flame.
- Avoid contact of sealants or adhesives with skin or eyes.
- No smoking during application.

WARRANTY

Tremco CPG APAC products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG APAC written instructions and (b) in any application recommended by Tremco CPG APAC, but which is proved to be defective, will be replaced free of charge. No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct. Tremco CPG APAC reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

TYPICAL PHYSICAL PROPERTIES			
Properties	ASTM Standard	Performance Minimum	TREMguard LLM
Overall Thickness	D751	1mm	1.53mm
Coating Over Scrim	D 7635	0.38mm	0.68mm
Breaking Strength	D 751, Grab Method	979 N	2120N(MD) 1990N (CD)
Elongation at Break	D 751, Grab Method	15%	26% (MD) 25% (CD)
Tearing Strength	D 751, Grab Method	245 N	278N (MD) 370.8N (CD)
Ozone Resistance	D 1149	Pass (No Cracks)	Pass
Weigh of Change After Heat Aging	D 573	1% Maximum	-0.7%
Crack After Heat Aging	D 573	No crack observed at 7x magnification when bent over a 3in diameter mandrel	Pass (MD) Pass (CD)
Linear Dimensions Change	D 1204, 6H at 70°C	1% Maximum	0.55%
Water Absorption	D 471	3% Maximum	0.10%
Factory Seam Strength	D751	>290N	869N
SRI (Solar Reflectance Index) Initial SRI/3 Years SRI	ANSI/CRRC S100 Standard & CRRC-1 Program Manual	N/A	99/91 (White Colour)
Solar Reflectance Initial/Weathered		N/A	0.80/0.74 (White Colour)
Thermal Emittance Initial/Weathered		N/A	0.87/0.87 (White Colour)
<i>Data is based upon typical product performance, and is subject to normal manufacturing tolerance and variance.</i>			

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