SHUANGSHI
GEOSYNTHETIC PROFESSIONAL

Technical information sheet

DESCRIPTION

Shuangshi Reinforced TPO is a flexible Thermoplastic Polyolefin membrane that is produced with polypropylene and ethylene-polypropylene,meanwhile with polyester weft-inserted reinforcement.which provide superior mechanical performance than normal ones. TPO(thermoplastic polylefin) is a single-ply membrane used widely in low-slope or flat roofing systems. Our Shuangshi Reinforced TPO membrane meets or exceeds all requirements for ASTM D 6878 Specification. The colour and thickness can be customized according to customer"s requirement. In general, the typical color is white, typical thickness is 45 mil (1.14 mm) and 60 mil (1.52 mm) .

METHOD OF APPLICATION

1. Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose, or foreign materials, oil, grease, and other materials that may damage the membrane.
2. All rough surfaces that can damage the membrane shall be repaired as specified to offer a smooth substrate.
3. All surface voids greater than ¼" (6.3 mm) wide shall be properly filled with an acceptable fill material.
4. Shuangshi Reinforced TPO membrane is installed as continuous roofing or waterproofing layer on the roof. Rolls are overlapped (side laps and end laps) prior to heat welding the seam areas.

STORAGE

- Store away from sources of punctures and physical damage.
- Assure that structural decking will support the loads incurred by material when stored on rooftop. The deck load limitations should be specified by the project designer.
- Store away from ignition sources as membrane will burn when exposed to open flame.

PRECAUTIONS

- Exercise caution when lifting, moving, transporting, storing, or handling membrane rolls to avoid sources of punctures and possible physical damage.
- Refer to Safety Data Sheets (SDS) for additional safety information.

Typical Properties				
Properties	**ASTM Standard**	**Performance Minimum**	**Typical Performance 45 mil**	**Typical Performance 60 mil**
Overall Thickness	D 751	0.039" (1 mm)	0.045" (1.14 mm) ± 10%	0.060" (1.52 mm) ± 10%
Breaking Strength	D 751, Grab Method	220 lbf (979 N)	310lbf (1,380 N)	340 lbf (1,513 N)
Elongation of Reinforcement Break	D 751, Grab Method	15%	24%	24%
Tearing Strength	D 751	55 lbf (245 N)	110lbf (490N)	110lbf (490N)
Brittleness Point	D 2137	-40 ° F (-40 ° C)	Pass	Pass
Puncture Resistance	FTM 101C, Method 2031	---	265 (1,180)	300 (1,300)
Ozone Resistance, No Cracks	D 1149	Pass (No Cracks)	Pass	Pass
Properties After Heat Aging (Retained Values) ASTM D 573-5376 h (224 days or 32 weeks) at 240 °F (116 °C)				
Breaking Strength	D 751, Grab Method	90% Minimum	> 90%	> 90%
Elongation at Break	D 751, Grab Method	90% Minimum	> 90%	> 90%
Tearing Strength	D 751	60% Minimum	> 60%	> 60%
Weight of Change	---	± 1% Maximum	< 1%	< 1%
Linear Dimension Change	D 1204, 6 h at 158 ° F (70 ° C)	± 1% Maximum	< 1%	< 1%
Water Absorption	D 471	± 3% Maximum	< 3%	< 3%
Weather Resistance*	G 155	10,800 kJ/m² Minimum	Pass	Pass

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TPO optional specifications and sizes.

Membrane Thickness: 0.045" (1.14 mm) Membrane Weight: 0.23 lb/ft² (1.1 kg/m²)		Membrane Thickness: 0.060" (1.52 mm) Membrane Weight: 0.31 lb/ft² (1.5 kg/m²)	
Available Sizes	**Available Colors**	**Available Sizes**	**Available Colors**
5' x 100' (1.5 x 30.5 m)	White, Tan, Gray	5' x 100' (1.5 x 30.5 m)	White, Tan, Gray
5' x 200' (1.5 x 61 m)	White	5' x 200' (1.5 x 61 m)	White
6' 2" x 100' (1.9 x 30.5 m)	White, Tan, Gray	6' 2" x 100' (1.9 x 30.5 m)	White, Tan, Gray
8' x 100' (2.4 x 30.5 m)	White, Tan, Gray	8' x 100' 2.4 x 30.5 m)	White, Tan, Gray
8' x 200' (2.4 x 61 m)	White	8' x 200' (2.4 x 61 m)	White
10' x 100' (3.0 x 30.5 m)	White, Tan, Gray	10' x 100' (3.0 x 30.5 m)	White, Tan, Gray
10' x 200' (3.0 x 61 m)	White	10' x 200' (3.0 x 61 m)	White
12' 4" x 100' (3.8 x 30.5 m)	White, Tan, Gray	12' 4" x 100' (3.8 x 30.5 m)	White, Tan, Gray
12' 4" x 200' (3.8 x 61 m)	White	12' 4" x 200' (3.8 x 61 m)	White