



STRUCT GUARD- TPO (TPO MEMBRANE SCRIM REINFORCED)

DESCRIPTION:

STRUCT GUARD TPO is a high performance, heat weldable, scrim reinforced thermoplastic polyolefin (TPO) sheet, manufactured and supplied in thickness of 1.2/1.5mm, designed for waterproofing, and heat shielding roofs of new and existing PEB Buildings.

High mechanical properties of the membrane ensure superior puncture resistance, breaking and tearing strength, while enabling excellent heat weld for fusion along the edges. Based on advanced polymer chemistry, the membrane is designed for weather resistance, sustaining cycles of hot, cold wet and dry environmental condition.

ADVANTAGES:

- Supplied in pre-manufactured standard thickness. No thickness variation unlike liquid applied systems.
- Outstanding puncture resistance, high breaking and tearing strength.
- Chlorine free, plasticizer free, phthalate free, safe for humans.
- Resistance to heat, UV, ozone, bacteria, chemical, acid corrosion.
- Continuous serviceability from -30°C-100°C)
- Resistance to root penetration, suitable for green roofs and below ground application.

APPLICATION AREAS:

- PEB ROOFS
 - Factory sheds
 - Warehouse & cold Storages
 - Airports, Railways, Metro & Bus transit stations
- GREEN ROOFS

PRODUCT INFORMATION:

PACKING STORAGE AND COVERAGE

ROLL DETAILS	Thickness (mm)	1.2	1.2	1.5	1.5
	Width (mtr)	1.6	2.0	1.6	2.0
	Length (mtr)	20	20	20	20
	Sq.mts(mtr ²)	32	40	32	40
	Weight(kgs)	43	53	53	66
STORAGE	Store membranes in dry & clean conditions and in their original, closed wrapping away from source of chemical contamination, damage, ignition source and open flame.				
SHELF LIFE	Shelf life is beyond 5 years.				
COVERAGE	The dimensions of the membrane are calculated to cover the substrate, including seam overlaps standard seams: 75 mm: seams with mechanical anchoring: 150 mm upstands : additional length of 150 mm.				

Constro Chem India Pvt. Ltd.

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TECHNICAL DATA SHEET:

PROPERTY	ASTM D638	STRUCT GUARD TPO 1.2 RF	STRUCT GUARD TPO 1.5 RF
Nominal thickness mm: ASTM D751	0.99 MIN.	1.2 ± 10%	1.5 ± 10 %
Thickness Over Scrim %; ASTM D 7635	> 30% of total thickness	35% Min	35% Min
Typical Weight Kg/m ²	NA	1.28 ± 10%	1.60 ± 10%
Breaking Strength LBF; MD/TD; ASTM D 751 GRAB METHOD	220 Min	225 Min 250 Typical	230 Min 260 Typical
Elongation at Break %, MD/TD; ASTM D 751	15% Min	15 Min 25 Typical	15 Min 25 Typical
Tearing Strength LBF; MD/TD; ASTM D 751 Procedure B	55 Min	55 Min 70 Typical	55 Min 70 Typical
Brittleness Point °C; ASTM D 2137	-40°C	Pass	Pass
Linear Dimensional Change %; 6hrs @ 70°C; ASTM D 1204	± 1% Max	< 1%	< 1%
Ozone Resistance 100 pphm, 168 hrs; ASTM D 1149	No Cracks @ 7% Magnification	Pass	Pass
Water Absorption %; 66 hrs @ 70°C TOP; ASTM D471	± 3% Max	< 3.0%	< 3.0%
Factory Seam Strength LBF; ASTM D 751 GRAB METHOD	66 Min	66 Min 80 Typical	66 Min 80 Typical
Water Vapour Permeance Perms; ASTM E96, Procedure B	No requirement	0.10 Max	0.10 Max
Puncture Resistance LBF; FTM 101C	No requirement	250	300
Properties after Heat Ageing 32weeks @ 115°C; ASTM D 573 (i) Breaking Strength (LBF) (ii) Elongation Retention (%) (iii) Weight change (%) (iv) Tearing Strength (LBF)	Retention 90% Min 90% Min ± 1.0 Max 60% Min	Pass	Pass
Weather Resistance KJ/(m ² .mm); ASTM G155	10,080 Min	> 21,600	> 21,600
Solar Reflectance Index	No requirement	100	100
Reflectivity ASTM C1549	No requirement	0.79	0.79
Emissivity ASTM C1371	No requirement	0.909	0.909

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