

TECHNICAL DATASHEET

GS TPO FDA WT

TPO MEMBRANE FOR DRINKING WATER TANKS



GreenShield™ CW TPO Water Tank Membrane is a high performance, heat weldable, thermoplastic polyolefin (TPO) sheet, manufactured and supplied in thickness of 1.2 mm, designed for waterproofing new and existing RCC water tanks, specifically for potable drinking water application.

Based on advanced polymer chemistry, the membrane is designed for excellent resistance to algae, fungi, bacteria as well as acid and bases corrosion, while continuous under water serviceability.

The sheet complies to USFDA 21 CFR - 177.150 Global Migration Test, allowing the membrane for contact with drinking water use for filling and storage. Besides this the sheet also complies to ASTM 2180 E - Anti Bacteria and Anti Microbial test and ASTM G 21 - Anti Fungal Growth.

GreenShield™ TPO Water Tank membrane is designed for easy installation inside the water tank either mechanically or fully adhered.

Features & Benefits

- ◇ Supplied in pre-manufactured standard thickness. No thickness variation unlike liquid applied systems.
- ◇ Outstanding puncture resistance, high breaking and tearing strength, with very high peel strength of seam joints and heat welds
- ◇ Chlorine free, plasticizer free, phthalate free. Environmentally friendly and safe for humans
- ◇ Exceptional resistance to moisture, bacteria, chemical, and acid/bases corrosion
- ◇ Resistance to root penetration, suitable for below ground tanks.
- ◇ Continuous serviceability from -30°C to 100°C - without cracking, tearing or brittleness failure

Application Areas

- ◇ PRCC Water Tanks
 - ◇ Underground
 - ◇ Overhead
- ◇ Chemical Storage Tanks
- ◇ Water Canals & Storages
- ◇ Water Bodies & Ducts

Packing, Storage & Coverage

ROLL DETAILS	Thickness (mm)	1.2	1.2
	Width (mtr)	1.6	2.0
	Length (mtr)	20	20
	Sq.mts (mtr ²)	32	40
	Weight (kgs)	40	50
	STORAGE	Store membranes in dry and clean conditions and in their original, closed wrapping away from sources of chemical contamination, damage, ignition sources and open flame. Shelf life is beyond 5 years. Exercise caution when lifting, moving, transporting, storage and handling to avoid puncture and physical damage.	
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		



GreenShield

Heatshielding & Waterproofing Your Roof

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PROPERTY	GS TPO 1.2 FDA WT
Nominal Thickness mm	1.2 ± 10%
Typical Weight Kg/m ²	1.28 ± 10%
Breaking Strength Kg/cm ² ; MD/TD; ASTM D 412	90 Min 100 Typical
Elongation at Break %, MD/TD; ASTM D 412	550 Min 650 Typical
Tearing Strength Kg/cm; MD/TD; ASTM D 412	45 Min 55 Typical
Global Migration Test mg/in ² ; US FDA 177.1520	0.08 (Compliant)*
Antifungal Resistance Rating; ASTM G 21	0 (No Growth)
Antimicrobial Resistance % Reduction; ASTM E 2180	> 99.9%
Brittleness Point °C; ASTM D 2137	Pass
Linear Dimensional Change %; 6hrs @ 70°C; ASTM D 1204	< 1%
Water Absorption % ; 66 hrs @ 70°C TOP; ASTM D471	< 2.0%
Factory Seam Strength LBF; ASTM D 751 Grab Method	55 Min 70 Typical
Water Vapour Permeance Perms; ASTM E96, Procedure B	0.10 Max
Puncture Resistance LBF; ASTM D751	50
Field Seam Strength LBF; ASTM D 751 Grab Method	40 Min 60 Typical
Solar Reflectance Index	100
Reflectivity ASTM C1549	0.79
Emissivity ASTM C1371	0.909

Note & Disclaimer: For latest updates and additional info, please consult our website at www.greenshield.co.in. Testing results and/or copies of Approval Documents for above mentioned membranes are available on request.

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is user responsibility to ensure that product is used and handled correctly and in accordance with applicable standards and recommendations and only for the intended purpose. We reserve the right to update information without prior notice to reflect ongoing research and development program. Country specific recommendations, considering local standards, practice codes, building regulations and industry guidelines, may effect installation recommendations. The supply of our products and services is subject to terms, warranties and exclusions available to you on request.