

RPP

Reinforced Polypropylene Geomembrane



RPP Geomembrane is a reinforced polypropylene geomembrane that is produced with a 9x9 polyester weft inserted scrim reinforcement. This head weldable geomembrane is available in 0.91mm (0.036"), 1.14mm (0.045") and 1.52mm (0.060") thickness. It is available in black, white, patina, tan and grey all with black backing.

PHYSICAL PROPERTY	TEST METHOD	PROPERTY OF UNAGED SHEET	PROPERTY AFTER AGING
			672 hours (28 days) @ 116°C (240°F)
Tolerance on nominal thickness, %	ASTM D 5199	0.91mm (0.036") ±10 1.14mm (0.045") ±10 1.52mm (0.060") ±10	
Thickness over scrim, mm (inches) 0.91mm (0.036") 1.14mm (0.045") 1.52mm (0.060")	ASTM D 4637 Optical Method	0.254 (0.010) min. 0.330 (0.013) min. 0.762 (0.030) min.	
Mass per unit area, kg/m ² (g/ft ²)(lb/ft ²) 0.91mm (0.036") 1.14mm (0.045") 1.52mm (0.060")	ASTM D 5261	0.83 (77)(0.17) Typical 1.03 (95)(0.21) Typical 1.22 (117)(0.25) Typical	
Breaking Strength, kN (lbf) (grab tensile at strain rate of 12in/min) 0.91mm (0.036"), 1.14mm (0.045") & 1.52mm (0.060")	ASTM D 7004	0.9 (200) min. 260 typ. 1.1 (250) min. 300 typ.	0.9 (200) min. 260 typ. 1.1 (250) min. 300 typ.
Elongation at break of fabric, %	ASTM D 7004	25 typical	25 typical
Tearing Strength, N (lbf) (50.8 mm(2")/min. strain rate) 0.91mm (0.036"), 1.14mm (0.045") & 1.52mm (0.060")	ASTM D 5884 (max load)	356 (80) min. 578 (130) typ. 445 (100) min. 712 (160) typ.	
Low temperature flexibility, °C (°F)	ASTM D 2136 1/8in. mandrel 4 hour @ temp.	-40 (-40) max. -46 (-50) Typical	
Linear Dimensional Change (shrinkage), % 6 h @ 70°C (158°F) of 1 h @ 100°C (212°F)	ASTM D 1204	+/- 1.0 max. -0.5 typical	
Ozone resistance, 100 pphm, 168 hours	ASTM D 1149	no cracks	
Resistance to water (distilled) absorption After 30 days immersion 50°C (122°F) Change in mass, %	ASTM D 471 (coating compound only)	1.0 max 0.5 typical	
Hydrostatic resistance, MPa (lbf/in ² or psi) (Mullen Burst) 0.91mm (0.036") 1.14mm (0.045") 1.52mm (0.060")	ASTM D 751 Procedure A	2.4 (350) min. 2.8 (400) typical 3.1 (450) typical 3.4 (500) typical	2.4 (350) min. 2.8 (400) typical 3.1 (450) typical 3.4 (500) typical

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Field Seam strength, kN/m (lbf/in) Seam Tested in peel after weld	ASTM D 413 1 in wide	3.9 (22) min 7.9 (45) typical peak load	
Water vapor permeance, Perms	ASTM E 96	0.10 max 0.05 typical	
Puncture resistance, N (lbf) 0.91mm (0.036") 1.14mm (0.045") 1.52mm (0.060")	ASTM D 4833 (index puncture)	378 (85) min 489 (110) typical 534 (120) typical 525 (118) typical	
Resistance to xenon-arc weathering ¹ Xenon-arc, 15,120 kJ/m ² total radiant exposure, visual condition at 10X	ASTM G 155 0.70 W/m ² 80°C B.P.T.	No cracks No loss of breaking or tearing strength	
Potable Water Accepted	NSF-61	Passes	
Chronic Toxicity Screening	EPA/600/4-89/001 ASTM E-729 Method 1000.0	Passes	Passes

¹Equivalent to 12,000 hours exposure at 0.35 W/m² irradiance B.P.T. is black panel temperature.

PACKAGING	
THICKNESS	WEIGHT
0.91mm (0.036")	0.83 kg/m ² (0.17 lb/ft ²)
1.14mm (0.045")	1.03 kg/m ² (0.21 lb/ft ²)
1.52mm (0.060")	1.22 kg/m ² (0.25 lb/ft ²)

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