

Polypropylene - PP78™

Cooley's reinforced polypropylene was developed in conjunction with Montell Polymers and offers the most versatile flexible geomembrane product available today. The unique combination of custom fabric reinforcement encapsulated by extruded high performance polypropylene proves a strong, highly chemical resistant membrane. A chemically inert polymer is modified by a cataloy process technology. With this process the molecular structure of the polymer is modified to provide many specialized properties. These properties include excellent flexibility, low thermal coefficient of expansion and contraction, outstanding dimensional stability, wide temperature range for excellent seaming, good chemical resistance. All this performance without Environmental Stress Cracking (ESC). Used for the containment of the most aggressive chemicals, to potable water, and aquaculture applications highlights the broad uses of the product. Thermally seamed and highly flexible, the liner can be supplied in large panels for minimum field seaming and simple, economical installation.

PROPERTY	TEST METHOD	VALUE				
		60	45	36	30	20
Gauge, nominal (mils)		60	45	36	30	20
Plies, reinforcing 9 x 9 1000d polyester scrim		1	1	1	1	1
Breaking Strength - fabric, minimum (lbs Min.)	ASTM D751 Method A	300 x 250	300 x 250	250 x 200	250 x 200	250 x 200
Low Temperature flexibility 1/8 in mandrel (°F)	ASTM D2136, 4 hrs. -65				
Puncture resistance, min. (lbs.)	FTMS 101C	275	250	250	250	250
Tear strength, minimum (lb)	ASTM D751 Tongue Tear	110	100	100	100	75
Dimensional stability (% change, maximum)	ASTM D1204 180°F/1 hour 1.0				
Hydrostatic Resistance minimum (psi)	ASTM D751, Method A, Procedure 1	350	350	350	350	300
Ply adhesion, minimum (lbs./in.)	ASTM D413	20	20	20	20	20
Water Absorption (% wt chge, max)	ASTM D471 <1%				
UV Resistance	ASTM G26 Xenon Arc >12,000 hrs				
Resistance to Soil Burial (% Tensile Retention)	ASTM D3083 (Part 9.5) 90% min.				

TYPICAL FACTORY SEAM PROPERTIES:

PROPERTY	TEST METHOD	VALUE
Bonded Seam Strength (lbs./width)	ASTM D751	160 min
Peel Adhesion, minimum (lbs./inch)	ASTM D413	20 or FTB