

GEOMEMBRANE LINER  
ENGINEERING SPECIFICATION GUIDE



## POLYVINYL CHLORIDE (PVC)

PROPERTIES	TEST METHOD	SPECIFIED VALUES				
Thickness	ASTM D 5199	20 ± 1 mil 0.51 ± 0.03 mm	30 ± 1.5 mil .76 ± .04 mm	40 ± 2 mil 1.02 ± .05 mm	50 ± 2.5 mil 1.27 ± .06 mm	60 ± 3 mils 1.52 ± .08 mm
<b>Tensile Properties</b>	ASTM D 882 Min					
Strength at Break		48 lbs/in 8.4 kN/m	73 lbs/in 12.8 kN/m	97 lbs/in 17.0 kN/m	116 lbs/in 20.3 kN/m	137 lbs/in 24.0 kN/m
Elongation		360%	380%	430%	430%	450%
Modulus @ 100%		21 lbs/in 3.7 kN/m	32 lbs/in 5.6 kN/m	40 lbs/in 7.0 kN/m	50 lbs/in 8.8 kN/m	60 lbs/in 10.5 kN/m
Tear Strength	ASTM D 1004 Min.	6 lbs 27 N	8 lbs 35 N	10 lbs 44 N	13 lbs 58 N	15 lbs 67 N
Dimensional Stability	ASTM D 1204 Max Chg	4%	3%	3%	3%	3%
Low Temperature Impact	ASTM D 1790 Pass	-15°F -26°C	-20°F -29 °C	-20°F -29°C	-20°F -29°C	-20°F -29°C
<b>Index Properties</b>						
Specific Gravity	ASTM D 792 Typical	1.2 g/cc	1.2 g/cc	1.2 g/cc	1.2 g/cc	1.2 g/cc
Water Extraction % loss (max.)	ASTM D 1239 Max Loss	0.15%	0.15%	0.20%	0.20%	0.20%
Average Plasticizer Molecular Weight	ASTM D 2124	400	400	400	400	400
Volatility Loss	ASTM D 1203 Max Loss	0.9%	0.7%	0.5%	0.5%	0.5%
Soil Burial						
Break Strength	G160 Max Chg	5%	5%	5%	5%	5%
Elongation		20%	20%	20%	20%	20%
Modulus at 100%		20%	20%	20%	20%	20%
Hydrostatic Resistance	ASTM D 751 Min.	68 psi 470 kPa	100 psi 690 kPa	120 psi 830 kPa	150 psi 1030 kPa	180 psi 1240 kPa
<b>Seam Strengths</b>						
Shear Strength	ASTM D 882 Min	38.4 lbs/in 6.7 kN/m	58.4 lbs/in 10 kN/m	77.6 lbs/in 14 kN/m	96 lbs/in 17 kN/m	116 lbs/in 20 kN/m
Peel Strength	ASTM D-882 Min	12.5 lbs/in 2.2 kN/m	15 lbs/in 2.6 kN/m	15 lbs/in 2.6 kN/m	15 lbs/in 2.6 kN/m	15 lbs/in 2.6 kN/m

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