



WESTERN
ENVIRONMENTAL LINER

PVC

DATA SHEET

The combination of chemical resistance and good physical properties has led to PVC usage in numerous industrial applications such as [Landfill Liners](#), [Secondary Waste Containment](#), Lagoons, [Effluent Containment Ponds](#), among others. PVC also works well in [water applications](#).

Certified Properties²	ASTM	PVC 10	PVC 20	PVC 30	PVC 40	PVC 50	PVC 60
Thickness	D-5199	10 ±0.5 mil 0.25±.013mm	20 ±1 mil 0.51 ± .03 mm	30 ±1.5 mil 0.76 ± .04 mm	40 ±2 mil 1.02 ± .05 mm	50 ±2.5 mil 1.27 ± .06 mm	60 ± 3 mil 1.52 ± .08 mm
Tensile Properties ³	<u>D-882⁴</u> Min						
Strength at Break		24 lbs/in 4.2 kN/m	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		250%	360%	380%	430%	430%	450%
Modulus at 100%		10 lbs/in 1.8 kN/m	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	<u>D-1004⁴</u> Min	2.5 lbs 11 N	6 lbs 27 N	8 lbs 35 N	10 lbs 44 N	13 lbs 58 N	15 lbs 67 N
Dimensional Stability	<u>D-1204⁴</u> Max Chg	4%	4%	3%	3%	3%	3%
Low Temperature Impact	<u>D-1790⁴</u> Pass	-10° F -23° C	-15° F -26° C	-20° F -29° C	-20° F -29° C	-20° F -29° C	-20° F -29° C
	ASTM	PVC 10	PVC 20	PVC 30	PVC 40	PVC 50	PVC 60
<u>Index Properties⁵</u>							
Specific Gravity	D-792 Typical	1.2 g/cc	1.2 g/cc	1.2 g/cc	1.2 g/cc	1.2 g/cc	1.2 g/cc
Water Extraction Percent Loss (max)	<u>D-1239⁴</u> Max Loss	0.15%	0.15%	0.15%	0.20%	0.20%	0.20%
Average Plasticizer Molecular Weight	<u>D-2124^{4,5}</u>	400	400	400	400	400	400
Volatile Loss Percent Loss (max)	<u>D-1203⁴</u> Max Loss	1.5%	0.9%	0.7%	0.5%	0.5%	0.5%
Soil Burial Break Strength	<u>G160⁴</u> Max Chg						
Elongation		5%	5%	5%	5%	5%	5%
Modulus at 100%		20%	20%	20%	20%	20%	20%
Hydrostatic Resistance	<u>D-751⁴</u> Min	42 psi 290 kPa	68 psi 470 kPa	100 psi 690 kPa	120 psi 830 kPa	150 psi 1030 kPa	180 psi 1240 kPa
	ASTM	PVC 10	PVC 20	PVC 30	PVC 40	PVC 50	PVC 60
Shear Strength ³	<u>D-882⁴</u> Min	20 lbs/in 3.47 kN/m	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 20kN/m
Peel Strength ³	<u>D-882⁴</u> Min	10 lbs/in 1.8 kN/m	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