



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](#).

<b>Certified Properties<sup>2</sup></b>	<b>ASTM</b>	<b>PVC 10</b>	<b>PVC 20</b>	<b>PVC 30</b>	<b>PVC 40</b>	<b>PVC 50</b>	<b>PVC 60</b>
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 <sup>3</sup>	<b><u>D-882<sup>4</sup></u></b> 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	<b><u>D-1004<sup>4</sup></u></b> 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	<b><u>D-1204<sup>4</sup></u></b> Max Chg	4%	4%	3%	3%	3%	3%
Low Temperature Impact	<b><u>D-1790<sup>4</sup></u></b> 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
	<b>ASTM</b>	<b>PVC 10</b>	<b>PVC 20</b>	<b>PVC 30</b>	<b>PVC 40</b>	<b>PVC 50</b>	<b>PVC 60</b>
<b><u>Index Properties<sup>5</sup></u></b>							
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)	<b><u>D-1239<sup>4</sup></u></b> Max Loss	0.15%	0.15%	0.15%	0.20%	0.20%	0.20%
Average Plasticizer Molecular Weight	<b><u>D-2124<sup>4,5</sup></u></b>	400	400	400	400	400	400
Volatile Loss Percent Loss (max)	<b><u>D-1203<sup>4</sup></u></b> Max Loss	1.5%	0.9%	0.7%	0.5%	0.5%	0.5%
Soil Burial Break Strength	<b><u>G160<sup>4</sup></u></b> Max Chg						
Elongation		5%	5%	5%	5%	5%	5%
Modulus at 100%		20%	20%	20%	20%	20%	20%
Hydrostatic Resistance	<b><u>D-751<sup>4</sup></u></b> 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
	<b>ASTM</b>	<b>PVC 10</b>	<b>PVC 20</b>	<b>PVC 30</b>	<b>PVC 40</b>	<b>PVC 50</b>	<b>PVC 60</b>
Shear Strength <sup>3</sup>	<b><u>D-882<sup>4</sup></u></b> 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 <sup>3</sup>	<b><u>D-882<sup>4</sup></u></b> 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