

Poly Vinyl Chloride Liner (PVC)



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QUALITY FOCUSED.
CUSTOMER DRIVEN.



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Poly Vinyl Chloride is the most commonly specified lining material in the industry. Manufactured by the calendaring or extrusion process, it is a highly flexible, non-reinforced, cost-effective, highly impermeable geomembrane with many uses and advantages. PVC can be fabricated into panels nearly one acre in size to reduce and / or eliminate the need for field seaming. PVC is degraded by sunlight, and should be covered with a minimum of a foot of clean fill to function as designed for prolonged exposure to sunlight.

EnviroCon Systems offers turnkey design-build, fabrication and installation services for all of our products, ensuring customers get the right products for their specific application. Custom fabricated panels allow many projects to be completed in a single panel installation with the assurance that seams are produced in a controlled environment. Whether the project is large or small, EnviroCon Systems fabrication services provide a custom solution or your project needs.

Applications:



Material Properties:

- Flexible
- NSF 61 Certified (potable water/fish friendly)
- Puncture Resistant
- Cost Effective
- Chemical Resistant
- Conforms to sub-Grade Contours
- Fish and Oil Resistant Grades
- Seamed with Adhesice or Heat Welding

Product Options:

- Grey & Black Color Options
- Available in Custom Shapes & Sizes
- 20 / 30 / 40 / 60 mil

Manufacturer Warranty:

- Up to 20 Year Warranty

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PVC Material Information



Properties	Test Method	Units	20 mil	30 mil	40 mil
Thickness	ASTM 05199	mils	20.0 ± 5%	30 ± 5%	40 ± 5%
Specific Gravity	ASTM 0792	mil	120 min.	120 min.	
Tensile Properties					
Breaking Strength	ASTM 0882	lbf / in.	48 min.	73 min.	97 min.
Elongation at Break		%	360 min.	380 min.	430 min.
100% Modulus		lbf / in.	20 min.	30 min.	40 min.
Tear Resistance	ASTM 01004	lbf	6.0 min.	8.0 min.	10 min.
Low Temperature	ASTM D 1790 -23°C		50% Pass @ Stated Temperature	50% Pass @ Stated Temperature	50% Pass @ Stated Temperature
Dimensional Stability	ASTM D 1204 100°C	%	4.0 max.	3.0 max.	3.0 max.
Water Extraction	ASTM 1239	%	0.15 max.	0.15 max.	0.20 max.
Volatile Loss	ASTM D 1203	%	0.90 max.	0.70 max.	0.50 max.
Resistance to Soil Burial					
Breaking Strength	ASTM G 160	% Change	5 max.	5 max.	5 max.
Elongation at Break		% Change	20 max.	20 max.	20 max.
100% Modulus		% Change	20 max.	20 max.	20 max.
Hydrostatic Resistance	ASTM D 751 Method A	psi	68 min.	100 min.	120 min.

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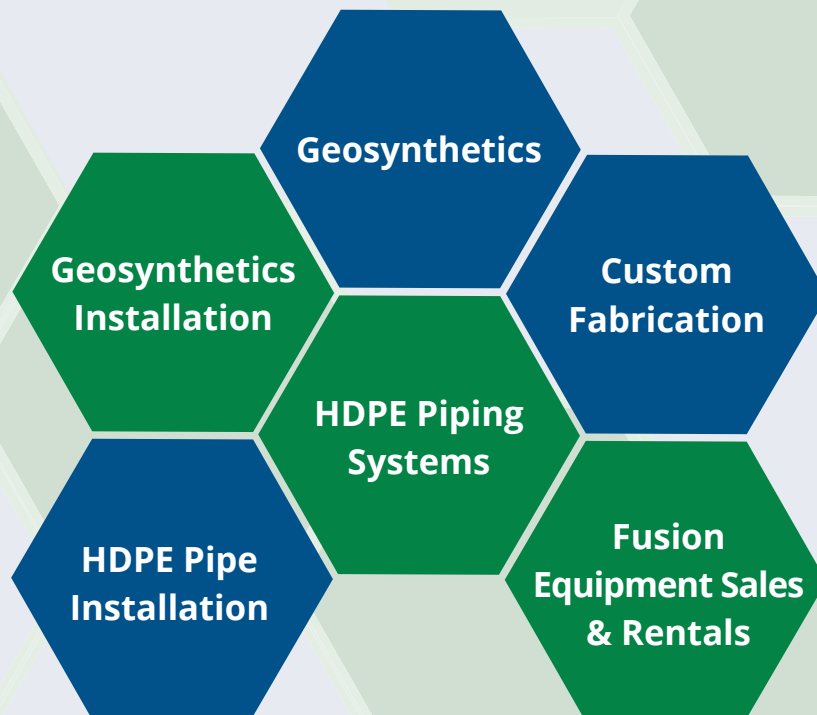


Certified Properties Thickness	ASTM D 5199	PVC 10 10± 0.5 mil 0.25± 0.013 mm	PVC 20 20± 1 mil 0.51± 0.03 mm	PVC 30 30± 1.5 mil 0.76± 0.04 mm	PVC 40 40± 2 mil 1.02± 0.05 mm	PVC 50 50± 2.5 mil 1.27± 0.06 mm	PVC 60 60± 0.5 mil 1.52± 0.08 mm
Tensile Properties ³	D-882 ⁴ min						
Strength at Break	(MD & TD)	24 lbs/in 4.2 kN/m	48 lbs/in 8.4 kN/m				
Elongation		250%	360%				
Modulus at 100%		10 lbs/in 1.8 kN/m	21 lbs/in 3.7 kN/m				
Tear Strength	D-1004 ⁴ min	2.5 lb 11 N	6 lbs 27 N				
Dimensional Stability	D-1204 ⁴ max chg (MD & TD)	4%	4%				
Low Temperature Impact	D-1790 ^{4,6} 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
Index Properties ³	ASTM	PVC 10	PVC 20	PVC 30	PVC 40	PVC 50	PVC 60
Specific Gravity	D 792 Typical	1.2 gcc	1.2 gcc	1.2 gcc	1.2 gcc	1.2 gcc	1.2 gcc
Water Extraction	D 1239 ⁴ max loss	0.15%	0.15%				
Percent Loss (max) Average Plasticizer	D 2124 ^{4,5,7}	400	400	400	400	400	400
Molecular Weight Volatile Loss	D1203 ⁴ max loss	1.5%	0.9%	0.7%	0.5%	0.5%	0.5%
Percent Loss (max) Soil Burial	G 160 ⁴ max chg						
Break Strength		5%	5%	5%	5%	5%	5%
Elongation		20%	20%	20%	20%	20%	20%
Modulus at 100%		20%	20%	20%	20%	20%	20%
Hydrostatic Resistance	D 751 ⁴ min	42 psi 290 kPa	68 psi 470 kPa				
	ASTM	PVC 10	PVC 20	PVC 30	PVC 40	PVC 50	PVC 60
Seam Strength	D 882 ⁴	20 lbs/in	38.4 lbs/in				
Shear Strength ³	min D 882 ⁴	3.45 kN/m 10 lbs/in	6.7 kN/m 12.5 lbs/in				
Peel Strength ³	min	1,8kN/m	2.2 kN/m				

1. FGI 1115 replaces PGI 1104 Specifications effective 1/1/15.
2. Certified properties are tested by lot as specified in PGI 1104 Appendix A
3. Metric values are converted from US values and are rounded to the available significant digits
4. Modifications or further details of test are described in PGI 1104 Appendix B
5. Index properties are tested once per formulation as specified in PGI 1104 Appendix A
6. For arid climates (sheet temperature of 50°C or 120°F) passing temperatures are -17°C for PVC 20 and -20°C for all other thicknesses
7. For arid climates use average plasticizer molecular weight of 410

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EnviroCon Systems, Inc., specializes in technical and safety intensive geosynthetics and HDPE piping solutions.



EnviroCon Systems, Inc., is committed to providing high quality, innovative containment solutions dedicated to a strong culture of best safety work practices and outstanding service, with integrity, loyalty, and meticulous attention to detail for our customers, employees, and investors.

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