

Geomembrane Material Comparison

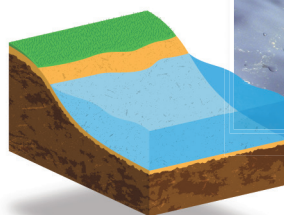
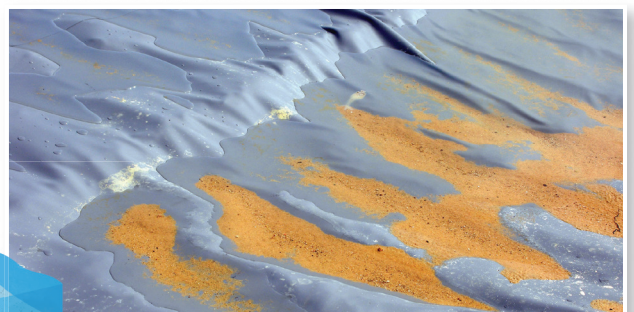
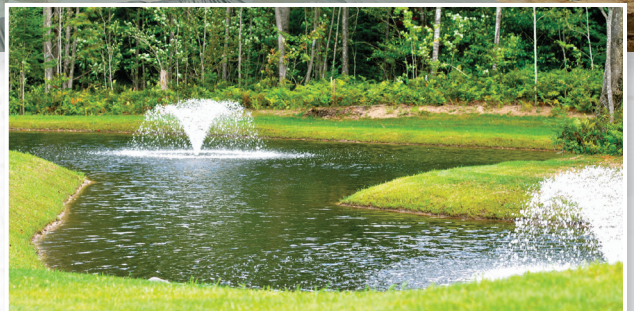


Geomembranes are used for a variety of applications, from containing potable water to lining landfills and ponds. The best material for the job depends, to some degree, on the specific application.

Will the membrane be exposed to the environment and UV radiation? Must it be resistant to specific oils, hydrocarbons, solvents or other chemicals?

There are a number of materials used to manufacture geomembranes, and each has its own strengths. Plastatech geomembranes are made from reinforced or non-reinforced PVC and designed to offer the best balance of strength, flexibility, durability, resistance profile and cost.

This table (reverse) offers a comparison of the most common materials used for geomembranes. All rankings are based on industry data and professional opinions as of April, 2016.



	Plastatech® PVC	CSPE-R	EIA-R	EPDM	EPDM-R	fPP	fPP-R	HDPE	LLDPE	LLDPE-R	WCPE
Material Specification Used	ASTM D7176			ASTM D7465	ASTM D7465	ASTM D7613	ASTM D7613	GM-13	GM-17	GM-25	
UV/Ozone Resistant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polymer Highly Flexible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	Possible**	Possible**	Yes
Can be Thermally Seamed	Yes	Yes	Yes	NR	NR	Yes	Yes	Yes	Yes	Yes	Yes
Can be Adhesively or Chemically Seamed	Yes	Yes	NR	Yes	Yes	NR	NR	NR	NR	NR	NR
Good Multiaxial Performance	Yes	Possible**	NR	Yes	NR	Yes	NR	NR	Possible**	NR	Yes
Can be Seamed in Cold Temperatures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Possible**	Possible**	Possible**	Yes
Resistant to Installation Damage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Repaired in Service	Yes	Possible**	Yes	Yes	Yes	Possible**	Possible**	Possible**	Possible**	Possible**	Yes
Prefabricated/Factory Panels available in 30+ feet width	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	Yes	Yes	Yes
Polymer Suitable for Exposed Use	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polymer Suitable for Buried Use	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Plastatech® PVC	CSPE-R	EIA-R	EPDM	EPDM-R	fPP	fPP-R	HDPE	LLDPE	LLDPE-R	WCPE
Rating System Criteria*	Yes	Possible**		NR = Not Recommended							

*Based on industry data reported by the Fabricated Geomembrane Institute.

**Possible ranking means - geomembrane usage may be possible with further investigation, proper thickness, proper formulation and manufacturer's approval.

Geomembrane Polymers

- PVC: Polyvinyl Chloride
- CSPE-R: Reinforced Chlorosulfonated Polyethylene
- EIA-R: Reinforced Ethylene Interpolymer Alloy
- EPDM: Ethylene Propylene Diene Terpolymer
- EPDM-R: Reinforced Ethylene Propylene Diene Terpolymer
- fPP: Flexible Polypropylene
- fPP-R: Reinforced Flexible Polypropylene
- HDPE: High-Density Polyethylene
- LLDPE: Linear Low-Density Polyethylene
- LLDPE-R: Reinforced Linear Low-Density Polyethylene
- WCPE: Woven Coated Polyethylene

Learn More

If you have questions or would like to know more about Plastatech and other geomembrane materials, visit plastatech.com or call one of our experts at 800-892-9358.

To learn more about Plastatech laminated PVC geomembranes, contact us at:

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