PRODUCT DATA SHEET

High Performance GSE Green Smooth Geomembrane

High Performance GSE Green Smooth is a co-extruded high density polyethylene (HDPE) geomembrane specifically designed to be used in the most stringent applications. This product has a UV stabilized, green upper surface that improves the aesthetics of closure applications for the community. It is primarily used in exposed applications, which can eliminate the need for cover soil and vegetative layers. This product contains only the finest raw materials to enable exceptional elasticity, environmental stress crack resistance, and excellent multi-axial break resistance. Included in this product is a custom additive package that has been engineered to enable extended geomembrane lifetime and improved resilience in elevated temperatures, hazardous waste containment, or a harsh chemical environment. In addition to a superior UV stabilization package, a well-dispersed premium grade of carbon black is utilized in the black layers to deliver superb UV resistance in exposed applications.

AT THE CORE:
Ideal for use in exposed applications where aesthetics are an issue, this geomembrane can eliminate the need for cover soil and vegetative layers.

Product Specifications

These product specifications exceed GRI GM13

Tested Property	Test Method	Frequency	Minimum Average Value				
			30 mil	40 mil	60 mil	80 mil	100 mil
Thickness, mil Lowest individual reading	ASTM D 5199	every roll	30 27	40 36	60 54	80 72	100 90
Density, g/cm³	ASTM D 1505	200,000 lb	0.94	0.94	0.94	0.94	0.94
Tensile Properties (each direction) Strength at Break, lb/in-width Strength at Yield, lb/in-width Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbbell, 2 ipm G.L. 2.0 in G.L. 1.3 in	20,000 lb	 120 66 800 13	 152 84 800 13	 243 132 800 13	 327 177 800 13	 410 212 800 13
Tear Resistance, lb	ASTM D 1004	45,000 lb	21	28	42	58	73
Puncture Resistance, lb	ASTM D 4833	45,000 lb	65	85	125	160	195
Multi-axial Break Resistance, %	ASTM D 5617	per formulation	30	30	30	30	30
Carbon Black Content(1), % (Range)	ASTM D 1603*/4218	20,000 lb	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	Note(2)	Note(2)	Note(2)	Note(2)	Note(2)
Notched Constant Tensile Load, hr	ASTM D 5397, Appendix	200,000 lb	1,000	1,000	1,000	1,000	1,000
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O_2, 1 atm	200,000 lb	>160	>160	>160	>160	>160
High Pressure Oxidative Induction Time, mins	ASTM D 5885, 150°C; O_2, 3.4 MPa	per formulation	>800	>800	>800	>800	>800
Oven aging at 85°C High Pressure OIT (min. avg.) - % retained after 90 days	ASTM D 5721 ASTM D 5885	per formulation	80	80	80	80	80
UV Resistance High Pressure OIT (min. avg.) - % retained after 1,600 hours	GM 11 ASTM D 5885	per formulation	80	80	80	80	80
TYPICAL ROLL DIMENSIONS							
Roll Length(3), ft			1,120	870	560	430	340
Roll Width(3), ft			22.5	22.5	22.5	22.5	22.5
Roll Area, ft²			25,200	19,575	12,600	9,675	7,650

[Product specifications continued on back]

Product Specifications [continued]

NOTES:

- [1]High Performance GSE Green may have an overall ash content greater than 3.0% due to the green layer. These values apply to the black layer only.
- [2]Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- [3]Roll lengths and widths have a tolerance of ±1%.
- High Performance GSE Green Smooth is available in rolls weighing approximately 4,000 lb.
- All GSE geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77° C when tested according to ASTM D 746.
- *Modified.

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

GSE ENVIRONMENTAL™

[DURABILITY RUNS DEEP]

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.