

# GSE HD Smooth Geomembrane

GSE HD Smooth is a high density polyethylene (HDPE) Geomembrane manufactured with the highest quality resin specifically formulated for flexible geomembranes. This product is used in applications that require excellent chemical resistance and endurance properties.



**AT THE CORE:**  
An HDPE geomembrane used in applications that require excellent chemical resistance and endurance properties.

## Product Specifications

These product specifications meet GRI GM13.

Tested Property	Test Method	Frequency	Minimum Average Value		
			120 mil	160 mil	200 mil
Thickness, (min. average) mm Lowest Individual Reading (-10%)	ASTM D 5199	Every roll	3.0 2.7	4.0 3.6	5.0 4.5
Density, g/cm <sup>3</sup>	ASTM D 792	90,000 kg	0.940	0.940	0.940
Tensile Properties (each direction) Strength at Break, N/mm Strength at Yield, N/mm Elongation at Break, (%) Elongation at Yield, (%)	ASTM D 6693, Type IV Dumbbell, 50 mm/min  G.L. 50 mm G.L. 33 mm	9,000 kg	80 44 700 12	108 60 700 12	130 70 700 12
Tear Resistance, N	ASTM D 1004	20,000 kg	374	500	700
Puncture Resistance, N	ASTM D 4833	20,000 kg	960	1100	1375
Carbon Black Content, % (Range)	ASTM D 1603*/4218	9,000 kg	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	20,000 kg	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Notched Constant Tensile Load, hr	ASTM D 5397, appendix	90,000 kg	400	400	400
Oxidative Induction Time (OIT) min	ASTM D 3895 (200°C, O <sub>2</sub> , 1atm)	90,000 kg	100	100	100
<b>Typical Roll Dimension</b>					
Roll Length <sup>(2)</sup> , (m)			70	40	30
Roll Width <sup>(2)</sup> , (m)			4.0	4.0	4.0
Roll Area <sup>(2)</sup> , (m <sup>2</sup> )			280	160	120
Standard Container, Roll			15	15	15

NOTES:

- <sup>(1)</sup>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.
- <sup>(2)</sup>Roll lengths and widths have a tolerance of ±1%.
- GSE HD is available in rolls weighing approximately 1200 kg.
- 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.

**[ DURABILITY RUNS DEEP ]** For more information on this product and others, please visit us at [GSEworld.com](http://GSEworld.com), call 20.2.38288888 or contact your local sales office.

