

# GSE HD Smooth Geomembrane

## METRIC

GSE HD is a smooth 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 GM 13

Tested Property	Test Method	Frequency	Minimum Average Value				
			0.75 mm	1.00 mm	1.50 mm	2.00 mm	2.50 mm
Thickness, (minimum average), mm Lowest individual reading	ASTM D 5199	every roll	0.750 0.675	1.00 0.90	1.50 1.35	2.00 1.80	2.50 2.25
Density, g/cm <sup>3</sup>	ASTM D 1505	90,000 kg	0.940	0.940	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	20 11 700 12	27 15 700 12	40 22 700 12	53 29 700 12	67 37 700 12
Tear Resistance, N	ASTM D 1004	20,000 kg	93	125	187	249	311
Puncture Resistance, N	ASTM D 4833	20,000 kg	240	320	480	640	800
Carbon Black Content, % (Range)	ASTM D 1603*/4218	9,000 kg	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	20,000 kg	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Notch Constant Tensile Load, hr	ASTM D 5397, Appendix	90,000 kg	300	300	300	300	300
Oxidative Induction Time, min	ASTM D 3895, 200°C; O <sub>2</sub> , 1 atm	90,000 kg	>100	>100	>100	>100	>100
<b>TYPICAL ROLL DIMENSIONS</b>							
Roll Length <sup>(2)</sup> , m			341	265	171	131	104
Roll Width <sup>(2)</sup> , m			6.86	6.86	6.86	6.86	6.86
Roll Area, m <sup>2</sup>			2,341	1,819	1,171	899	711

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 Smooth is available in rolls weighing approximately 1,800 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 800.435.2008 or contact your local sales office.