



The Pioneer of Geosynthetics  
S I N C E 1 9 7 2

## GSE Green Textured Geomembrane (Single-Sided)

GSE Green Textured is a co-extruded textured high density polyethylene (HDPE) geomembrane on one or both sides. It is manufactured from the highest quality resin specifically formulated for flexible geomembranes. It has a U.V. stabilized green upper surface that improves the aesthetics for the community. GSE Green Textured provides an increased frictional resistance surface and is primarily used in exposed applications which can eliminate the need for cover soil and vegetative layers.

### Product Specifications

*These product specifications meet or exceed GRI GM 13.*

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE VALUE	
<b>Product Code</b>			HST100 A02T	HST150 A02T
Thickness, mm (mil) <sup>(1)</sup>	ASTM D 5994	every roll	1.0 (40)	1.5 (60)
Lowest individual reading mm (mil)			0.85 (34)	1.28 (51)
Density, g/cm <sup>3</sup>	ASTM D 1505	every 5th roll	0.94	0.94
Tensile Properties (each direction) <sup>(2)</sup>	ASTM D 6693, Type IV Dumbell, 2 ipm	every 5th roll		
Strength at Break, N/mm-width (lb/in)			11 (63)	16 (91)
Strength at Yield, N/mm-width (lb/in)			15 (86)	23 (131)
Elongation at Break, %	G.L. = 51 mm (2.0 in)		150	150
Elongation at Yield, %	G.L. = 33 mm (1.3 in)		13	13
Tear Resistance, N (lb)	ASTM D 1004	every 5th roll	125 (28)	187 (42)
Puncture Resistance, N (lb)	ASTM D 4833	every 5th roll	320 (72)	480 (108)
Carbon Black Content <sup>(3)</sup> , %	ASTM D 1603	every 5th roll	2.0 – 3.0	2.0 – 3.0
Carbon Black Dispersion	ASTM D 5596	every 5th roll	Note <sup>(4)</sup>	Note <sup>(4)</sup>
Asperity Height	ASTM D 7466	every second roll	Note <sup>(5)</sup>	Note <sup>(5)</sup>
Notched Constant Tensile Load <sup>(6)</sup> , hrs	ASTM D 5397, Appendix	90,000 kg	400	400
Oxidative Induction Time, minutes	ASTM D 3895, 200° C; O <sub>2</sub> , 1 atm	90,000 kg	>100	>100
TYPICAL ROLL DIMENSIONS				
Roll Length (approximate), m (ft)			200 (656)	100 (328)
Roll Width, m (ft)			7.0 (23)	7.0 (23)
Roll Area, m <sup>2</sup> (ft <sup>2</sup> )			1,400 (15,088)	700 (7,544)
40' Standard Container, roll			9	14

#### NOTES:

- <sup>(1)</sup>Minimum average core thickness is -5% of the nominal thickness; lowest thickness for 8 out of 10 values is - 10% of the nominal value; lowest thickness for any of the 10 values is -15% of the nominal value.
- <sup>(2)</sup>The combination of stress concentrations due to co-extrusion texture geometry and the small specimen size results in large variation of test results. Therefore, these tensile properties are minimum average values.
- <sup>(3)</sup>GSE Green may have an overall ash content greater than 3.0% due to the green layer.
- <sup>(4)</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>(5)</sup>0.25 mm average. 8 of 10 readings >0.18 mm. Lowest individual > 0.13 mm.
- <sup>(6)</sup>NCTL for HD Textured is conducted on representative smooth membrane samples.
- GSE HD Standard Textured is provided in rolls weighing approximately 1,050 kg (2,315 lb) each.
- All GSE geomembranes have dimensional stability of ±2% when tested with ASTM D 1204 and LTB of <-77° C when tested with ASTM D 746.

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