TECHNICAL DATA SHEET

GSE HD 80mil/2.00mm A Black Smooth 1101439

The GSE® HD Standard Geomembrane series are produced from high-quality, high-density polyethylene (HDPE) formulations produced to meet or exceed the industry standard GRI GM 13 for HDPE geomembrane barriers.

PROPERTY(1)	TEST METHOD	FREQUENCY	UNIT Imperial	Value
Thickness (min. avg.)	ASTM D5199	Every roll	mils	80.0
Thickness (min.)	ASTM D5199	Every roll	mils	72.0
Resin Density	ASTM D1505	One per batch	g/cc	> 0.932
Melt Index - 190°C/2.16 kg (max.)	ASTM D1238	One per batch	g/10 min	1.0
Density	ASTM D792	Every 10 rolls	g/cm^3	≥ 0.940
Carbon Black Content	ASTM D4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OIT - Standard (min. avg.)	ASTM D8117	One per batch	min	100
Tensile Properties (min. avg) (2)	ASTM D6693	Every 2 rolls		
Strength at Yield			lbs/in	176
Elongation at Yield			%	13
Strength at Break			ppi	324
Elongation at Break			%	700
Tear Resistance (min. avg.)	ASTM D1004	Every 5 rolls	lbf	56
Puncture Resistance (min. avg.)	ASTM D4833	Every 5 rolls	lbf	156
Dimensional Stability	ASTM D1204	Certified	%	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D5397	One per batch	hr	500
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation		
HP-OIT (min. avg.)	ASTM D5885		%	80
UV Resistance - % retained after 1,600 hr	ASTM D7238	Per formulation		
HP-OIT (min. avg.)	ASTM D5885		%	50
Low Temperature Brittleness	ASTM D746	Certified	°F	- 106

SUPPLY SPECIFICATIONS(Roll dimensions may vary ±1%)

Roll Dimension - Width	-	ft	22.5
Roll Dimension - Length	-	ft	430
Area (Surface/Roll)	-	ft^2	9675

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.

* All values are nominal test results, except when specified as minimum or maximum.
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