



GSE STANDARD PRODUCTS

Product Data Sheet

GSE Conductive Geomembranes

GSE Conductive is a patented, spark-testable HDPE geomembrane that is made of a thin layer [approximately 3 mils (0.075 mm)] of electrically conductive carbon black that is installed on the conductive side of the deployed sheet. This conductive layer is part of the total thickness, the remainder of which is a standard carbon black stabilized primary layer of high density (HDPE). GSE Conductive can be easily tested for post-installation damage using equipment capable of performing spark testing in the field. Variations of this product include a black or white textured upper surface and a smooth white upper surface. *These product specifications meet or exceed GRI GM13.*

Product Specifications

GSE Advantage Products

GSE GundSeal • GSE Conductive • GSE White • GSE PermaNet • GSE BioDrain System

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM VALUE			
Product Code			HDC 040A000	HDC 060A000	HDC 080A000	HDC 100A000
Thickness, (minimum average) mil (mm) Lowest individual reading (-10%)	ASTM D 5199	every roll	40 (1.00) 36 (0.91)	60 (1.50) 54 (1.40)	80 (2.00) 72 (1.80)	100 (2.50) 90 (2.30)
Density, g/cm ³	ASTM D 1505	200,000 lb	0.94	0.94	0.94	0.94
Tensile Properties (each direction) ⁽¹⁾ Strength at Break, lb/in-width (N/mm) Strength at Yield, lb/in-width (N/mm) Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbell, 2 ipm G.L. = 2.0 in (51 mm) G.L. = 1.3 in (33 mm)	20,000 lb	152 (27) 84 (15) 700 12	228 (40) 126 (22) 700 12	304 (53) 168 (29) 700 12	380 (67) 210 (37) 700 12
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	28 (125)	42 (187)	56 (249)	70 (311)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	72 (320)	108 (480)	144 (640)	180 (800)
Carbon Black Content ⁽²⁾ , %	ASTM D 1603*/4218	20,000 lb	2.0	2.0	2.0	2.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	+Note 1	+Note 1	+Note 1	+Note 1
Notched Constant Tensile Load, hr	ASTM D 5397, Appendix	200,000 lb	300	300	300	300
REFERENCE PROPERTY	TEST METHOD	FREQUENCY	NOMINAL VALUE			
Oxidative Induction Time, min	ASTM D 3895, 200° C; O ₂ , 1 atm	200,000 lb	>100	>100	>100	>100
Roll Length ⁽³⁾ (approximate), ft (m)			870 (265)	560 (171)	430 (131)	340 (104)
Roll Width ⁽³⁾ , ft (m)			22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)
Roll Area, ft ² (m ²)			19,575 (1,819)	12,600 (1,171)	9,675 (899)	7,650 (711)

NOTES:

- +Note 1: 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.
- GSE Conductive is available in rolls weighing about 3,900 lb (1,769 kg).
- ⁽¹⁾Due to surface effects caused by the conductive layer, these tensile properties are minimum average values.
- ⁽²⁾GSE Conductive may have an overall carbon black percentage above 3.0% due to the high carbon black loadings in the conductive layer.
- 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.
- ⁽³⁾Roll lengths and widths have a tolerance of ± 1%.
- *Modified.

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