



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

GSE PermaNet HL, UL and SL Geonet

GSE PermaNet (available in High, Ultra or Super Load) is a biplanar geonet with two sets of diagonally crossing parallel strands in a patented round cross-sectional shape. This unique strand structure provides superior compressive creep resistance and ensures continuous flow performance over a broad range of conditions and long durations. PermaNet is manufactured through a one-step coextrusion process from prime quality high density polyethylene resins. This product is durable under rigorous environmental conditions and ideal for extremely demanding applications.

Product Specifications

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE VALUE ⁽¹⁾		
			PermaNet HL (High Load)	PermaNet UL (Ultra Load)	PermaNet SL (Super Load)
Transmissivity ⁽²⁾ , gal/min/ft (m ² /sec)	ASTM D 4716	1/540,000 ft ²	19.0 (4.0 x 10 ⁻³)	24.0 (5.0 x 10 ⁻³)	28.8 (6.0 x 10 ⁻³)
Compressive Strength, lb/ft ² (kPa)	ASTM D 1621	1/540,000 ft ²	40,000 (1,913)	40,000 (1,913)	40,000 (1,913)
Creep Reduction Factor	GRI GC8	1/formulation	1.2@15,000 psf	1.3@20,000 psf	1.3@25,000 psf
Density, g/cm ³	ASTM D 1505	1/50,000 ft ²	0.94	0.94	0.94
Tensile Strength (MD), lb/in (N/mm)	ASTM D 5035/7179	1/50,000 ft ²	100 (17)	100 (17)	100 (17)
Carbon Black Content, %	ASTM D 1603*/4218	1/50,000 ft ²	2.0	2.0	2.0
NOMINAL ROLL DIMENSIONS					
Geonet Core Thickness, mil (mm)	ASTM D 5199	1/50,000 ft ²	270 (6.9)	300 (7.6)	330 (8.4)
Roll Width ⁽³⁾ , ft (m)			15 (4.6)	15 (4.6)	15 (4.6)
Roll Length ⁽³⁾ , ft (m)			200 (60)	200 (60)	200 (60)
Roll Area, ft ² (m ²)			3,000 (278)	3,000 (278)	3,000 (278)

NOTES:

- ⁽¹⁾ AOS in mm is a maximum value.
- ⁽²⁾ Gradient of 0.1, normal load of 25,000 psf, water at 70° F between steel plates for 15 minutes.
- ⁽³⁾ Roll widths and lengths have a tolerance of ±1%.