

## Super Gripnet® Liner

HDPE & LLDPE

Designed for applications where drainage and stability are critical, such as landfill liner or caps, landfill slopes and mining reclamation projects. HDPE and LLDPE Super Gripnet Liners feature underside spikes for adherence to steep slopes and are simple and economical to install. Geonets and Geocomposites are not needed when using Super Gripnet® Liner for considerable cost savings.

Both HDPE and LLDPE Super Gripnet® Liner are manufactured using flat die extrusion into profile rollers. The rollers give the liner its distinctive studs and spikes. Because the studs and spikes are produced simultaneous with the liner material, and not added in a separate process, there's no risk of the spikes separating from the liner.

HDPE and LLDPE Super Gripnet® Liners have smooth edges, allowing wedge welds between adjacent sheets. If needed, a special cutting tool can remove studs and spikes for cross seam welding of HDPE. No cutting is required for LLDPE.

## High Density Polyethylene Super Gripnet® Liner

Property	Test Method	Frequency	Minimum Average Values			
Thickness (nominal ), mil (mm)	ASTM D5994	Per Roll	50 (1.25)	60 (1.5)	80 (2.0)	100 (2.5)
Thickness (min avg ), mil (mm)			47.5 (1.19)	57 (1.43)	76 (1.9)	95 (2.38)
Thickness (min 8 of 10), mil (mm)			45 (1.12)	54 (1.35)	72 (1.8)	90 (2.25)
Thickness (lowest individual), mil (mm)			42.5 (1.06)	51 (1.28)	68 (1.7)	85 (2.13)
Asperity Height mils, (mm)	ASTM D7466	2nd Roll	130 (3.3)	130 (3.3)	130 (3.3)	130 (3.3)
Friction Spike Height mils, (mm)	ASTM D7466	2nd Roll	175 (4.45)	175 (4.45)	175 (4.45)	175 (4.45)
Density, g/cc, minimum	ASTM D792, Method B	200,000 lb	0.94	0.94	0.94	0.94
Tensile Properties (both directions)	ASTM D6693, Type IV					
Strength @ Yield, lb/in width (N/mm)	2 in/minute	20,000 lb	110 (19.3)	132 (23.1)	176 (30.8)	220 (38.5)
Elongation @ Yield, % (GL=1.3in)			13	13	13	13
Strength @ Break, lb/in width (N/mm)			110 (19.3)	132 (23.1)	176 (30.8)	220 (38.5)
Elongation @ Break, % (GL=2.0in)			200	200	200	200
Tear Resistance, lb, s. (N)	ASTM D1004	45,000 lb	38 (169)	42 (187)	56 (249)	70 (310)
Puncture Resistance, lbs. (N)	ASTM D4833	45,000 lb	80 (356)	90 (400)	120 (534)	150 (667)
Carbon Black Content, % (range)	ASTM D4218	20,000 lb	2 - 3	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion (Category)	ASTM D5596	45,000 lb	Only near spherical agglomerates: 10 views in Cat. 1 or 2			
Stress Crack Resistance (SP-NCTL), hrs.	ASTM D5397 Appendix	200,000 lb	500	500	500	500
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O2	200,000 lb	≥140	≥140	≥140	≥140



## Low Density Polyethylene Super Gripnet® Liner

Property	Test Method	Frequency	Minimum Average Values			
Thickness (nominal ), mil (mm)	ASTM D5994	Per Roll	50 (1.25)	60 (1.5)	80 (2.0)	100 (2.5)
Thickness (min avg ), mil (mm)			47.5 (1.19)	57 (1.43)	76 (1.9)	95 (2.38)
Thickness (min 8 of 10), mil (mm)			45 (1.12)	54 (1.35)	72 (1.8)	90 (2.25)
Thickness (lowest individual), mil (mm)			42.5 (1.06)	51 (1.28)	68 (1.7)	85 (2.13)
Asperity Height mils, (mm)	ASTM D7466	2nd Roll	130 (3.3)	130 (3.3)	130 (3.3)	130 (3.3)
Friction Spike Height mils, (mm)	ASTM D7466	2nd Roll	175 (4.45)	175 (4.45)	175 (4.45)	175 (4.45)
Density, g/cc, minimum	ASTM D792, Method B	200,000 lb	0.939	0.939	0.939	0.939
Tensile Properties (both directions)	ASTM D6693, Type IV					
Strength @ Break, lb/in width (N/mm)	2 in/minute	20,000 lb	105 (18.4)	126 (22.1)	168 (29.4)	210 (36.8)
Elongation @ Break, % (GL=2.0in)			300	300	300	300
Tear Resistance, lb, s. (N)	ASTM D1004	45,000 lb	30 (133)	40 (178)	53 (236)	64 (285)
Puncture Resistance, lbs. (N)	ASTM D4833	45,000 lb	55 (245)	70 (311)	90 (400)	110 (489)
Carbon Black Content, % (range)	ASTM D4218	20,000 lb	2 - 3	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion (Category)	ASTM D5596	45,000 lb	Only near spherical agglomerates: 10 views in Cat. 1 or 2			
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O2	200,000 lb	≥140	≥140	≥140	≥140

## Benefits of HDPE and LLDPE Super Gripnet® Liner

- Installed as a single layer without geocomposite sections, reducing installation time and cost
- Improved planar flow, reduced risk of chemical/biological clogging
- No risk of material separation. Studs, spikes and liner are integrated in a single production step
- Meets or exceeds GRI's GM13 (HDPE Super Gripnet)
- Meets or exceeds GRI's GM17 (LLDPE Super Gripnet)

## Super Gripnet® Liner Supply Information

[Standard Roll Dimensions]

Thickness		Width		Length		Area (approx)	
mil	mm	ft	m	ft	m	ft <sup>2</sup>	m <sup>2</sup>
50	1.25	23	7	300	91.4	6,900	640
60	1.5	23	7	300	91.4	6,900	640
80	2	23	7	300	91.4	6,900	640
100	2.5	23	7	300	91.4	6,900	640