



Design Properties for Stratagrid Geogrids

Ultimate and Creep Limited Strengths

			Microgrid ^{1,2}	SG 150 ¹	SG 200	SG 350	SG 500	SG 550	SG 600	SG 700
Ultimate Strength ^{2,3}	ASTM D-6637 METHOD A	lbs/ft (kN/m)	2000 (29.2)	1875 (27.4)	3600 (52.5)	5000 (73.0)	6400 (93.4)	8150 (118.9)	9100 (132.8)	11800 (172.2)
Creep Limited Strength	ASTM D-5262	lbs/ft (kN/m)	1149 (16.8)	1210 (17.7)	2323 (33.9)	3226 (47.1)	4129 (60.3)	5258 (76.7)	5871 (85.7)	7613 (111.1)

	Microgrid	SG 150	SG 200	SG 350	SG 500	SG 550	SG 600	SG 700
RF installation damage (Sand, Silt & Clay, D ₅₀ < 0.3mm)	1.20	1.20	1.10	1.10	1.07	1.07	1.07	1.07
RF installation damage (3/4" minus angular aggregate, D ₅₀ < 2mm)	1.20	1.35	1.20	1.20	1.15	1.15	1.15	1.15
RF installation damage (1.5" minus angular aggregate, D ₅₀ < 6mm)	1.90	1.40	1.25	1.25	1.20	1.20	1.20	1.20
RF durability	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10

Long-Term Design Strength (LTDS or T_{al})⁴

		Microgrid ¹	SG 150 ¹	SG 200	SG 350	SG 500	SG 550	SG 600	SG 700
For Sand, Silt & Clay	lbs/ft (kN/m)	871 (12.7)	916 (13.4)	1919 (28.0)	2666 (38.9)	3508 (51.2)	4467 (65.2)	4988 (72.8)	6468 (94.4)
For 3/4" minus angular aggregate	lbs/ft (kN/m)	na	815 (11.9)	1760 (25.7)	2444 (35.7)	3264 (47.6)	4157 (60.7)	4641 (67.7)	6018 (87.8)
For 1.5" minus angular aggregate	lbs/ft (kN/m)	na	786 (11.5)	1689 (24.7)	2346 (34.2)	3128 (45.7)	3983 (58.1)	4448 (65.0)	5767 (84.2)

Soil Interaction Coefficients for Pullout (C_i) and Direct Sliding (C_{ds})

Sand/Clay (ML, CL)	0.6 - 0.7
Sandy Silts & Clay (SC, GC)	0.7 - 0.8
Uniformly-Graded Sands, Silty Sand (SP, SM)	0.8 - 0.9
Gravel, Sand Gravel Mix, Well-Graded Sand (SW, GP, GW)	0.9 - 1.0

Molecular Properties

Item	Test Method	Unit	Spec.
Molecular Weight (min.)	GRI GG8	g/mol	25000
Carboxyl End Group (CEG) Count (max.)	GRI GG7	Meq/kg	30

Physical Properties

		Microgrid	SG 150	SG 200	SG 350	SG 500	SG 550	SG 600	SG 700
Roll Dimensions	Width x Length	feet (m)	8 x 225 (2.44 x 68.6)	6 x 150 (1.83 x 45.7)	6 x 300 (1.83 x 91.4)	6 x 300 (1.83 x 91.4)	6 x 300 (1.83 x 91.4)	6 x 300 (1.83 x 91.4)	6 x 300 (1.83 x 91.4)
		Feet (m)	n/a	12 x 150 (3.66 x 45.7)	12 x 150 (3.66 x 45.7)	12 x 200 (3.66 x 61.0)	12 x 200 (3.66 x 61.0)	12 x 200 (3.66 x 61.0)	12 x 200 (3.66 x 61.0)
Area	Sq. Yds. Sq. m.	250 (209)	100/200 (83.6/167.2)	200/200 (167.2/167.2)	200/267 (167.2/223.0)	200/267 (167.2/223.0)	200/267 (167.2/223.0)	200/267 (167.2/223.0)	200/267 (167.2/223.0)
Weight Per Roll	lbs (kg)	100 (45.40)	45/90 (20.4/40.9)	110/110 (49.9/49.9)	130/175 (59.0/79.5)	155/210 (70.3/95.3)	180/240 (81.7/109)	190/255 (86.3/115.8)	215/290 (97.6/121.2)

¹Bi-Axial (strength in both directions) / ²Microgrid Ultimate Tensile per ASTM D-4595 / ³Values shown are Minimum Average Roll Values

⁴LTDS or T_{al} = Tult (RFcreep x RFinstallation damage x RFdurability) as per FHWA NHI-00-043

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