

PRODUCT DATA

STRATAGRID

StrataGRID® is a geogrid that reinforces soil by interacting with soil particles creating a durable and lasting soil and geosynthetic composite. These high performance geogrids are constructed of high molecular weight and high tenacity polyester yarns that are precision knitted into a dimensionally stable, uniform network of apertures providing superior tensile reinforcement. A proprietary UV stabilized coating provides further chemical and mechanical benefits. StrataGRID is engineered to be mechanically and chemically durable, in both the harsh construction installation phase and in aggressive soil environments (pH range from 2-10).

Design Properties

ULTIMATE AND CREEP LIMITED TENSILE STRENGTHS

			Microgrid ^{1,2}	SG150 ¹	SG200	SG350	SG500	SG550	SG600	SG700
Ultimate Strength ^{2,3}	ASTM D 6637 Method A	lbs/ft (kN/m)	2,000 (29.2)	1,875 (27.4)	3,500 (51.1)	4,900 (71.5)	6,400 (93.4)	8,150 (118.9)	9,100 (132.8)	11,700 (170.7)
Creep, Limited Strength	ASTM D 5262	lbs/ft (kN/m)	1,266 (18.5)	1,165 (17.0)	2,215 (32.3)	3,101 (45.3)	4,051 (59.1)	5,158 (75.3)	5,759 (84.1)	7,405 (108.1)

REDUCTION FACTORS FOR INSTALLATION DAMAGE AND DURABILITY

RF _{Inst. Damage} (Sand, Silt & Clay, D ₅₀ < 0.6mm)	1.20	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
RF _{Inst. Damage} (3/4" minus Angular Aggregate, D ₅₀ < 6mm)	1.30	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
RF _{Inst. Damage} (1.5" minus Angular Aggregate, D ₅₀ < 20mm)	1.40	1.20	1.20	1.20	1.20	1.20	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	1.10	1.10

LONG-TERM DESIGN STRENGTH (LTDS or T_d)⁴

For Sand, Silt & Clay	lbs/ft (kN/m)	959 (14.0)	1,008 (14.7)	1,918 (28.0)	2,685 (39.2)	3,507 (51.2)	4,466 (65.2)	4,987 (72.8)	6,411 (93.6)
For 3/4" minus Angular Aggregate	lbs/ft (kN/m)	885 (12.9)	962 (14.0)	1,831 (26.7)	2,563 (37.4)	3,348 (48.9)	4,263 (62.2)	4,760 (69.5)	6,120 (89.3)
For 1.5" minus Angular Aggregate	lbs/ft (kN/m)	822 (12.0)	882 (12.9)	1,678 (24.5)	2,349 (34.3)	3,069 (44.8)	3,908 (57.0)	4,363 (63.7)	5,610 (81.9)

SOIL INTERACTION COEFFICIENTS FOR PULLOUT (C_i) AND DIRECT SLIDING (C_{ds})

Silts/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	Unit	Spec.
Molecular Weight (min.)	g/mol	25,000
Caboxyl End Group (CEG) Count (max.)	meq/kg	30

Physical Properties

Roll Dimensions ^{5,6}	Width x Length	feet (m)	10 x 225 (3.04 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)	6 x 300 (1.83 x 91.4)
Area	Sq. yds (Sq. m.)	250 (209.0)	100 (83.6)	200 (167.2)	200 (167.2)	200 (167.2)	200 (167.2)	200 (167.2)	200 (167.2)	200 (167.2)
Weight per Roll	lbs (kg)	105 (47.6)	45 (20.4)	110 (49.9)	130 (59.0)	155 (70.3)	170 (77.1)	180 (81.6)	210 (95.3)	

1. Denotes both machine and cross-machine direction strength (biaxial strength).

2. MicroGrid ultimate tensile strength determined in accordance with ASTM D 4595.

3. Minimum Average Roll Values for machine direction unless otherwise noted (Lot Average minus 2 x Standard Deviation).

4. LTDS or Tal = Tult / (RFcreep x RFinstallation damage x RFDurability).

5. Special order roll sizes are available for SG product styles 12-ft. or 18-ft. widths and/or custom roll lengths.

6. Roll weights are average values including shipping cores. Actual roll weights may vary.

7. StrataGRID soil and segmental retaining wall unit interface properties are available upon request.

8. Note: For Permanent walls the Tal needs to be factored for uncertainties; Typically RUncertainties = 1.5.

This product specification supercedes all prior specifications for the products described and is not applicable to any products shipped prior to JANUARY 1, 2008.

12-foot and 18-foot roll widths available upon request



STRATA

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