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STRATAGRID Product Data Sheet

STRATAGRID® is a geogrid reinforcement for soil. These high performance geogrids are constructed of high molecular weight and high tenacity polyester yarns utilizing a complex knitting process and low temperature coating technology to provide superior engineering properties. Yarns are precision knitted into a dimensionally stable, uniform network of apertures providing significant tensile reinforcement capacity. 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). A proprietary UV stabilized coating provides further chemical and mechanical benefits.

Design Properties

		Microgrid ^{1,2}	SG150 ¹	SG200	SG350	SG500	SG550	SG600	SG700	
Ultimate and Creep Limited Tensile Strengths										
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} (3/8" minus, Sand, Silt & Clay, D ₅₀ < 1mm)	1.20	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
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
RF _{Durability}	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_{al})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)

Physical Properties

Roll Dimensions ⁵	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 ⁶	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)	

- Denotes both machine and cross-machine direction strength (Biaxial Strength)
- MicroGrid ultimate tensile strength determined in accordance with ASTM D 4595
- Minimum Average Roll Values for machine direction unless otherwise noted (Lot Avg minus 2 x Standard Deviation)
- LTDS or T_{al} = Tult / (RFcreep x RFinstallation damage x RFdurability)
- Special order roll sizes are available for SG product styles, 12-ft or 18-ft widths and/or custom roll lengths.
- Roll Weights are average values including shipping cores. Actual roll weights may vary.
- StrataGrid soil and segmental retaining wall unit interface properties are available upon request.
- For Permanent walls the T_{al} needs to be factored for uncertainties; Typically RFuncertainties = 1.5

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

This product specification supersedes all prior specifications for the products described and is not applicable to any products shipped prior to January 1, 2008. This information has been carefully compiled by Strata Systems, Inc., and to the best of our knowledge is accurate. Final determination of the suitability of any information or material is the sole responsibility of the user. Structural design shall be performed by a licensed design professional.