

PRODUCT DATA



STRATAGRID®

Stratagrid is a geogrid reinforcement for soil. These high performance geogrids are constructed of high molecular weight and high tenacity knitted polyester yarns utilizing a complex knitting process and a polymeric coating to provide superior engineering properties. Stratagrid is engineered to be mechanically and chemically durable, in both the harsh construction installation phase and in aggressive soil environments (pH range from 3-9).

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 Single-Rib	lbs/ft (kN/m)	2,000 (29.2)	1,875 (27.4)	3,600 (52.5)	5,000 (73.0)	6,400 (93.4)	8,150 (118.9)	9,100 (132.8)	11,800 (172.2)
Creep Limited Strength	ASTM D 5262 D 6992	lbs/ft (kN/m)	1,149 (16.8)	1,136 (16.6)	2,323 (33.9)	3,226 (47.1)	4,129 (60.3)	5,258 (76.7)	5,871 (85.7)	7,613 (111.1)
Long-term Design Strength (LTDS or T _{al}) ⁴										
Sands, Silt and Clay		lbs/ft (kN/m)	871 (12.7)	861 (12.56)	1,919 (28.0)	2,666 (38.9)	3,412 (49.8)	4,346 (63.4)	4,852 (70.8)	6,292 (91.8)

Molecular Properties			
Item	Test Method	Unit	Spec
Molecular Weight (min)	GRI GG8	g/mol	25,000
Caboxyl End Group (CEG) Count (max)	GRI GG7	meq/kg	30

Physical Properties										
Roll Dimensions ⁵	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)	6 x 300 (1.83 x 91.4)
						12 x 150 (3.66 x 45.7)	12 x 225 (3.66 x 68.6)	12 x 225 (3.66 x 68.6)	12 x 225 (3.66 x 68.6)	12 x 225 (3.66 x 68.6)
Area		Sq.yds (Sq.m)	200 (167.2)	100/200 (83.6/167.2)	200/300 (167.2/250.8)	200/300 (167.2/250.8)	200/300 (167.2/250.8)	200/300 (167.2/250.8)	200/300 (167.2/250.8)	200/300 (167.2/250.8)

STRATATEX™

StrataTex (ST Series) is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. StrataTex (SW Series) geotextile fabrics are woven polypropylene materials offering optimum performance when used in stabilization applications. StrataTex is engineered to be mechanically and chemically durable, in both the harsh construction installation phase and in aggressive soil environments (pH range from 2-13).

Design Properties			ST140 4.0 oz.	ST142 4.2 oz.	ST160 6.0 oz.	ST170 7.0 oz.	ST180 8.0 oz.	ST110 10.0 oz.	SW200 4.0 oz.	SW315 6.3 oz.
Grab Tensile Strength	ASTM D4632	lbs (kN)	100 (0.445)	120 (0.53)	160 (0.71)	180 (0.80)	205 (0.91)	250 (1.11)	200 (0.89)	315 (1.40)
Grab Elongation	ASTM D4632	%	50	50	50	50	50	50	15	15
Trapezoid Tear	ASTM D4533	lbs (kN)	50 (0.22)	50 (0.22)	65 (0.27)	75 (0.33)	85 (0.38)	100 (0.44)	75 (0.33)	120 (0.53)
Puncture Resistance	ASTM D6241	lbs (kN)	300 (1.32)	340 (1.46)	410 (1.82)	475 (2.11)	535 (2.38)	700 (3.11)	700 (3.12)	1000 (4.45)

Physical Properties										
Roll Dimension	Width x Length	feet	12.5 x 360	12.5 x 360	12.5 x 360	12.5 x 360	12.5 x 360	12.5 x 360	12.5 x 432	12.5 x 360
						15 x 360	15 x 360	15 x 300	15 x 300	15 x 300
Area		Sq.yds	500/600	500/600	500/500	500/500	500/500	500/500	600/600	500/500
Weight per Roll ⁶		lbs	146/172	152/180	195	220	250	320	180	210

1) Denotes both machine and cross-machine direction strength (biaxial strength); 2) Microgrid ultimate tensile strength determined in accordance with ASTM D4595; 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) for sand,silt and clay soil Dmax ≤ 25mm, D₉₀ < 0.2mm. Installation damage factor for other soils available upon request; 5) Special order roll values are available for SG product styles 12-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) For permanent walls the above LTDS or Tal should account for an overall factor of safety for uncertainties per industry standards, typically FSunc=1.5 [Note: Tal=LTDS/FSunc]; 9) At time of manufacturing, handling, storage and shipping may change these properties.

Strata Systems, Inc. has refined the science of soil reinforcement. Our success is a direct result of the power of STRATAGRID® performance and its ability to solve common civil engineering problems. STRATAGRID interacts with the soil particles to create a permanent composite soil/geosynthetic structure. These high performance geogrids are constructed of high tenacity polyester yarn utilizing a complex knitting process to provide superior engineering properties.

Applications

- **SEGMENTAL RETAINING WALLS**
- **REINFORCED STEEP SLOPES**
- **REINFORCED EMBANKMENTS OVER SOFT SOIL**
- **LANDSLIDE REPAIR**
- **REINFORCED FOUNDATIONS**

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