

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 polymeric coating 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.

Design Properties

| Ultimate and Creep Limited Tensile Strengths | | StrataMesh ^(1, 2, 5, 6) | SGB 30 ^(1, 5) | SGU 40 | SGU 60 | SGU 80 | SGU 100 | SGU 120 | SGU 150 | SGU 180 | SGU 200 | SGU 300 | SGU 400 | |
|--|---------------------------------|------------------------------------|--------------------------|------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|--------|
| Ultimate Strength ⁽³⁾ (MD) | ASTM D 6637 Method B Wide-Width | lbs/ft | 1,764 x 1,884 | 2,055 | 2,740 | 4,111 | 5,482 | 6,852 | 8,222 | 10,278 | 12,334 | 13,704 | 20,556 | 27,408 |
| | | (kN/m) | 25.8 x 27.5 | 30.0 | 40.0 | 60.0 | 80.0 | 100.0 | 120.0 | 150.0 | 180.0 | 200.0 | 300.0 | 400.0 |
| Tensile Strength at 5% Strain ⁽³⁾ | ASTM D 6637 Method B Wide-Width | lbs/ft | 500 x 980 | 925 x 616 | 1,233 | 1,850 | 2,467 | 3,083 | 3,700 | 4,625 | 5,180 | 5,482 | 8,222 | 10,963 |
| | | (kN/m) | 7.3 x 14.3 | 13.5 x 9.0 | 18.0 | 27.0 | 36.0 | 45.0 | 54.0 | 67.5 | 75.6 | 80.0 | 120.0 | 160.0 |
| Creep Reduction Factor | ATSM D6692/D5262 | | 3.00 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 |
| Creep Limited Strength | ASTM D5262/D6992 | lbs/ft | 588 x 628 | 1,437 | 1,916 | 2,875 | 3,833 | 4,792 | 5,750 | 7,187 | 8,625 | 9,583 | 14,375 | 19,166 |
| | | (kN/m) | 8.58 x 9.17 | 21.0 | 28.0 | 42.0 | 56.0 | 70.0 | 84.0 | 105.0 | 126.0 | 140.0 | 210.0 | 280.0 |

Reduction Factors for Installation Damage (RF_{ID})

| Reinforced Fill Description | StrataMesh ^(1, 2, 5, 6) | SGB 30 ^(1, 5) | SGU 40 | SGU 60 | SGU 80 | SGU 100 | SGU 120 | SGU 150 | SGU 180 | SGU 200 | SGU 300 | SGU 400 |
|--|------------------------------------|--------------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| RF _{ID} (Soil - 25mm minus, D ₅₀ ≤ 0.2mm) (SM, SC, CL, ML) - Sand & Silt | 1.05 | 1.07 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.07 | 1.07 | 1.06 |
| RF _{ID} (Soil - 25mm minus, D ₅₀ ≤ 5mm) (SW, SP, SM, SC) - Sand | 1.50 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| RF _{ID} (Soil - 25mm (1") minus, D ₅₀ ≤ 10mm) (GP, GW, GM, GC, SW, SP, SM, SC) | 1.90 | 1.20 | 1.15 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| RF _{ID} (Soil - 50mm (2") minus, D ₅₀ ≤ 20mm) (GP) | 1.90 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 | 1.35 |

Reduction Factors for Durability (RF_D)

| | | | | | | | | | | | | |
|--|---------------------|------|------|------|------|------|------|------|------|------|------|------|
| RFD (4 ≤ pH ≤ 9) (PET - CEG<30, MW>25,000) | 1.10 ⁽⁶⁾ | 1.10 | 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_{ai})⁽⁴⁾ (RF_D (4 ≤ pH ≤ 9))

| USCS Soil Classification | StrataMesh ^(1, 2, 5, 6) | SGB 30 ^(1, 5) | SGU 40 | SGU 60 | SGU 80 | SGU 100 | SGU 120 | SGU 150 | SGU 180 | SGU 200 | SGU 300 | SGU 400 | |
|--------------------------------|------------------------------------|--------------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|--------|
| SM, SC, CL, ML | lbs/ft | 382 x 408 | 1,221 | 1,584 | 2,376 | 3,168 | 3,960 | 4,752 | 5,940 | 7,128 | 8,142 | 12,213 | 16,438 |
| | (kN/m) | 5.58 x 5.95 | 17.8 | 23.1 | 34.7 | 46.2 | 57.8 | 69.3 | 86.7 | 104.0 | 118.8 | 178.2 | 240.0 |
| SW, SP, SM, SC | lbs/ft | 267 x 285 | 1,188 | 1,584 | 2,376 | 3,168 | 3,960 | 4,752 | 5,940 | 7,128 | 7,920 | 11,880 | 15,840 |
| | (kN/m) | 3.9 x 4.2 | 17.3 | 23.1 | 34.7 | 46.2 | 57.8 | 69.3 | 86.7 | 104.0 | 115.6 | 173.4 | 231.2 |
| GP, GW, GM, GC, SW, SP, SM, SC | lbs/ft | 211 x 225 | 1,089 | 1,515 | 2,178 | 2,904 | 3,630 | 4,356 | 5,445 | 6,534 | 7,260 | 10,890 | 14,520 |
| | (kN/m) | 3.1 x 3.3 | 15.9 | 22.1 | 31.8 | 42.4 | 53.0 | 63.6 | 79.5 | 95.4 | 106.0 | 159.0 | 212.0 |
| GP | lbs/ft | 211 x 225 | 968 | 1,290 | 1,936 | 2,582 | 3,227 | 3,872 | 4,840 | 5,808 | 6,453 | 9,680 | 12,907 |
| | (kN/m) | 3.1 x 3.3 | 14.1 | 18.8 | 28.3 | 37.7 | 47.0 | 56.5 | 70.6 | 84.8 | 94.2 | 141.3 | 188.4 |

Physical Properties

| | | | | | | | | | | | | | |
|----------------------------------|----------------------|-------------------|-----|--------|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Roll Weight (6.25' wide, 200 sy) | Pounds | 92 ⁽⁷⁾ | 83 | 77 | 95 | 120 | 138 | 156 | 181 | 204 | N/A | N/A | N/A |
| | Kilograms | 42 ⁽⁷⁾ | 38 | 35 | 43 | 54 | 63 | 71 | 82 | 93 | N/A | N/A | N/A |
| Roll Weight (12.5' wide, 400 sy) | Pounds | | 170 | 160 | 203 | 254 | 289 | 326 | 375 | 421 | 454 | 628 | 728 |
| | Kilograms | | 77 | 73 | 92 | 115 | 131 | 148 | 170 | 191 | 206 | 285 | 330 |
| Product Weight | Ounces / Square Yard | 5.7 | 6 | 5.6 | 7 | 9 | 10.5 | 11.9 | 13.9 | 15.7 | 17 | 24 | 28 |
| | Grams / Square Meter | 193.2 | 203 | 189.84 | 237 | 305 | 356.0 | 403.4 | 471.2 | 532.2 | 576 | 814 | 949 |

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

| | |
|--|-----------|
| Silts/Clay (ML, CL) | 0.6 - 0.7 |
| Sandy silts & clay (SC, GC) | 0.7 - 0.8 |
| Poorly-Graded Sand and Gravel, Silty Sand (GP, GM, SP, SM) | 0.8 - 0.9 |
| Well-Graded Gravel, Sand Gravel Mix, Well-Graded Sand (SW, GW) | 0.9 - 1.0 |

- Denotes both machine and cross-machine direction strength (Biaxial Strength)
- StrataMesh ultimate tensile strength determined in accordance with ASTM D 4595
- Values shown are based on Minimum Average Roll Values (Lot Avg minus 2 x Standard Deviation)
- LTDS or T_{ai} = T_{ULT} / (RF_{CR} x RF_{ID} x RF_D)
- Machine Direction (MD) x Cross Machine Direction (CMD)
- This product is made from polypropylene yarn
- Roll size is 8' wide, 240 sy

NOTES:
 Special order roll sizes may be available for SGU/SGB product styles.
 StrataGrid soil and segmental retaining wall unit interface properties are available upon request.



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