

POLYESTER BIAXIAL GEOGRID

Product Data Sheet

POLYESTER BIAXIAL GEOGRID is a high-performance soil reinforcement product primarily used for slope stabilization and retaining wall installations. Constructed of high molecular weight and high tenacity polyester yarns utilizing a complex knitting process and polymeric coating to provide superior engineering properties, Polyester Biaxial Geogrid 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			Microgrid ^(1,2)	SG150 ⁽⁴⁾	SG200	SG350	SG500	SG550	SG650	SG700	SG1200	SG1300	SG1400
Ultimate and Creep Limited Tensile Strengths													
Ultimate Strength ⁽³⁾ (MD)	ASTM D 6637 Method A Single-Rib	Pounds / Foot (kilonewtons / meter)	2,000 (29.2)	1,875 (27.4)	3,600 (52.5)	5,000 (73.0)	6,400 (93.4)	8,150 (118.9)	10,500 (153.2)	11,800 (172.2)	13,704 (200.0)	20,556 (300.0)	27,408 (400.0)
Creep Limited Strength	ASTM D 5262 D 6992	Pounds / Foot (kilonewtons / meter)	1,149 (16.8)	1,136 (16.6)	2,323 (33.9)	3,226 (47.1)	4,129 (60.3)	5,258 (76.7)	6,774 (98.9)	7,613 (111.1)	8,841 (129.0)	13,262 (193.5)	17,683 (258.0)

Long-term Design Strength (LTDS or T _{dl}) ⁽⁴⁾													
Sands, Silt & Clay													
		Pounds / Foot (kilonewtons / meter)	871 (12.7)	861 (12.6)	1,919 (28.0)	2,666 (38.9)	3,412 (49.8)	4,346 (63.4)	5,598 (81.7)	6,292 (91.8)	7,307 (106.6)	10,960 (159.9)	14,614 (213.2)

Physical Properties														
Roll Dimensions ⁽⁵⁾	Roll Size A (Width x Length)	Feet (meters)	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)	12.5 x 300 (3.8 x 91.4)	12.5 x 300 (3.8 x 91.4)	12.5 x 300 (3.8 x 91.4)	
	Roll Size B (Width x Length)	Feet (meters)	-- --	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)	12 x 225 (3.66 x 68.6)	12 x 225 (3.66 x 68.6)	12 x 225 (3.66 x 68.6)	12.5 x 200 (3.8 x 61)	12.5 x 200 (3.8 x 61)	12.5 x 200 (3.8 x 61)
Area	Square Yards (square meters)		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)	200/300 (167.2/250.8)	416.6/277.7 (347.3/231.8)	416.6/277.7 (347.3/231.8)	416.6/277.7 (347.3/231.8)
Product Weight ⁽⁶⁾	Ounces / Square Yard (grams / square meter)		5.0 (169.5)	5.3 (179.7)	6.7 (227.2)	7.1 (240.7)	9.2 (311.9)	10.5 (356.0)	12.0 (406.9)	12.7 (430.6)	18.0 (610.3)	25.6 (868.0)	33.6 (1139.2)	
Weight per Roll ⁽⁶⁾	Roll Size A (Width x Length)	Pounds (kilograms)	65 (29.5)	45 (20.4)	90 (40.9)	100 (45.4)	125 (56.7)	140 (63.6)	155 (70.3)	175 (81.6)	480 (218.2)	682 (310.0)	900 (409.1)	
	Roll Size B (Width x Length)	Pounds (kilograms)	-- --	95 (43.2)	140 (63.6)	155 (70.4)	192 (87.3)	215 (97.7)	237 (107.7)	267 (121.4)	315 (142.9)	450 (204.1)	630 (285.8)	

Molecular Properties			
Item	Test Method	Unit	Spec
Molecular Weight (min)	GRI GG8	grams / mole	25,000
Carboxyl End Group (CEG) Count (max)	GRI GG7	millequivalent / kilogram	30

- Denotes both machine and cross-machine direction strength (Biaxial Strength)
- Microgrid ultimate tensile strength determined in accordance with ASTM D 4595
- Based on Minimum Average Roll Values for machine direction unless otherwise noted.
- LTDS or T_{dl} = T_{ULT} / (RFcreep x RFInstallation damage x RFDurability) for sand, silt and clay soil D_{max} ≤ 25mm, D₅₀ < 0.2mm. Installation damage factor for other soils available upon request.
- Special order roll sizes are available for SG product styles, 12-ft widths and/or custom roll lengths.
- Roll Weights are average values including shipping cores. Actual roll weights may vary.

This product specification supersedes all prior specifications for the products described and is not applicable to any products shipped prior to January 1, 2014. 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.

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