

ENVIROGRID® GEOCELL PRODUCT SPECIFICATIONS

EnviroGrid® is a three-dimensional cellular confinement system that provides confinement and reinforcement to granular material for load support erosion control, slope protection and retaining wall applications. EnviroGrid® sections are manufactured from 58 strips of HDPE, resulting in a section length of 29 cells. Each strip is the approved width and 142 inches (3.6m) in length. Each EnviroGrid® product is manufactured in cell heights of 3", 4", 6", and 8".

PRODUCT DIMENSIONS

Expansion - Nominal					Minimum	Maximum
Product Code	Cell Size width, length in (mm)	Cell Area in2 (cm2)	Section width, length ft (m)	Section Area ft2 (m2)	Section width, length ft (m)	Section width, length ft (m)
EGA 20	10.2 x 8.8 (259 x 224)	44.8 (289)	8.4 x 21.4 (2.56 x 6.52)	180 (16.7)	9.2 x 19.4 (2.8 x 5.9)	7.6 x 23.3 (2.3 x 7.1)
EGA 30	12.6 x 11.3 (320 x 287)	71.3 (460)	8.4 x 27.4 (2.56 x 8.35)	230 (21.4)	9.2 x 24.8 (2.8 x 7.6)	7.6 x 30.0 (2.3 x 9.1)
EGA 40	20 x 18.7 (508 x 475)	187 (1206)	8.4 x 45 (2.56 x 13.72)	378 (35.14)	9.2 x 40.9 (2.8 x 12.5)	7.6 x 49.7 (2.3 x 15.1)

PRODUCT PERFORMANCE STRUCTURAL INTEGRITY, DURABILITY

MATERIAL PROPERTIES	UNIT	VALUE	MATERIAL PROPERTIES	TEST METHOD	UNIT	VALUE
Seam Peel Strength - <i>Minimum</i>	lbf/in (N/cm)	> 80 (142)	Environmental Stress Crack Resistance	ASTM D 1693	hours	>5,000
Seam Peel Strength - <i>Long Term</i> ¹	lb (N)	160 (710)	Oxidation Resistance ⁵	EN ISO 13438	years	>100
Internal Junction Efficiency ²	%	>100	Weathering Resistance ⁶	EN 12224	%	100
Mechanical Junction Efficiency ²	%	>100				
Peak Friction Angle Ratio ³	n/a	0.95				

MATERIAL PROPERTIES

MATERIAL PROPERTIES	TEST METHOD	UNIT	VALUE
Polymer Density	ASTM D 1505	g/cm3	0.935 - 0.965
Flexural Storage Modulus	ISO 6721	MPA	>750
Carbon Black Content ⁴	ASTM D 1603	%	1.5 - 2.0
Texture Density (Shape: Rhomboidal)	-	indentations / cm2	22 - 31
Sheet Thickness - before texture	ASTM D 5199	mil (mm)	50 (1.27) -5%, +10%
Sheet Thickness - after texture	ASTM D 1599	mil (mm)	60 (1.52) -5%, +10%

1) A 4" (100mm) wide seam sample shall support a 160lb (72.5kg) load for a period of 7 days minimum in a temperature-controlled environment undergoing a temperature change on a 10 hour cycle from ambient room to 130°F (54°C). Ambient room temperature per ASTM E 41.
 2) Junction efficiency determined as a percentage of junction performance (EN ISO 13426-1) to perforated strip performance (EN ISO 10319).
 3) Value for clean granular infill material.
 4) Standard black HDPE strips. For tan/green EnviroGrid®, hindered amine light stabilizer (HALS) content will be 2.0% by weight of carrier.
 5) Predicted to be durable for a minimum of 100 years in natural soil with a pH between 4 and 9 and at soil temperature <25°C. Testing was conducted at 100°C.
 6) 100% of original tensile strength retained following exposure to intense UV radiation and accelerated weathering in accordance with EN 12224.

MANUFACTURING CERTIFICATIONS

Geo Products manufactures EnviroGrid® in the United States in an ISO 9001 facility under stringent quality control standards. Geo Products Quality Management System is ISO 9001:2015 certified and holds the CE and UKCA marking for EnviroGrid® products.



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