

GLADIATOR GRID® 650

HIGH STIFFNESS GEOGRID



Gladiator Grid® 650 is a bi-axial polypropylene (PP) geogrid specifically designed to have higher tensile and radial stiffness at low strains and possesses large aperture which provides an ideal solution for soil stabilization, railway sub-ballast reinforcement, and other highway challenges. This is a monolithic and isotropic geogrid with thick and wide ribs, thick integral nodes, and uniform square apertures. The ribs have a high degree of molecular orientation continuing in part through the mass of the integral node. Engineered to be mechanically and chemically stable in aggressive soil environments, Gladiator Grid's® geometry allows for strong mechanical interlock with soil particles to resist construction damage and environmental exposure. It is formulated to resist UV degradation and is not susceptible to hydrolysis, environmental stress cracking, and micro-organism attack. Geogrid-composite options are also available upon request.

TESTED PROPERTY	TEST METHOD	UNIT ENGLISH (METRIC)	VALUE ENGLISH (METRIC)	
			MD	XD
Carbon Black Content	ASTM D 4218	%	2	
Secant Stiffness EA at 0.5% Strain ⁽¹⁾	ASTM D 6637	lbs/ft (kN/m)	59,356(866)	59,356(866)
Radial Stiffness at 0.5% Strain ⁽¹⁾	ASTM D 6637	lbs/ft (kN/m)	44,551 (650)	
Junction Efficiency ⁽²⁾⁽³⁾	GRI-GG2 ASTM D 7737	%	>95	>95
Flexural Rigidity ⁽¹⁾	ASTM D 7748	mg-cm	3,500,000	
Aperture Stability ⁽²⁾⁽⁴⁾	US. COE	kg-cm/deg	13.0	
Resistance to Chemical Degradation ⁽²⁾	EPA 9090	%	100	
Resistance to UV degradation @500 hours ⁽²⁾	ASTM D 4355	%	100	
Minimum Rib Thickness	Callipered	inch (mm)	0.13 (3.3)	0.08 (2.0)
Junction Thickness	Callipered	inch (mm)	0.21 (5.4)	
Aperture Size ⁽²⁾⁽⁵⁾	Nominal	inch (mm)	1.30 (33.0)	1.30 (33.0)
ROLL DIMENSIONS				
Roll Width	Minimum	ft (m)	12.95 (3.95) or 19.52 (5.95)	
Roll Length ⁽⁶⁾	Minimum	ft (m)	164.04 (50)	

NOTES:

(1) Minimum Average Roll Values (MARV) – Calculated as (mean minus 2x standard deviation)

(2) Average

(3) Junction efficiency is defined as junction strength divided by multi-rib strength

(4) Resistance to in plane rotational movement measure at an applied moment = 5kg-cm in accordance with US Army Corps of Engineers methodology for the measurement of torsional rigidity.

(5) Aperture tolerance: within $\pm 10\%$ coefficient of variance

(6) Custom Length orders can be accommodated

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