product specifications

SYNTEC GEOSYNTHETICS

MULTILAYER BI-AXIAL GEOGRIDS

FEATURING TENAX MS 500

TENAX MS™ 500 is composed of five layers of high strenghth extruded biaxially oriented polypropylene geogrids. The layers are rolled and stitched together without superimposing the grids creating a geogrid with random sized apertures designed to accommodate a variety of fill materials. The random aperture geometry, many tensile elements, and multiple layers of the geogrid enhance soil/geogrid interaction. TENAX MS™ 500 geogrid interlocking capacity, distributes applied loads, and prevents localized shear failure.

TYPICAL APPLICATIONS

• Soft soil stabilization • Base Reinforcement • Embankments over soft soils • Working platforms • Haul roads

MATERIAL CHARACTERISTICS	TEST	DATA			
polymer type		polypropylene			
carbon black content	ASTM D 4218	0.5%			
DIMENSIONAL CHARACTERISTICS	TEST	UNIT			NOTES
thickness: rib – MD/TD	ASTM D 1777	in (mm) / in (mm)	0.05(1.27) / 0.05(1.27)		b,d,e
aperture size – MD/TD		in (mm) x in (mm)	2.36 (60) / 2.76 (70)		b,d,e
open area	CW 02215	%	70		b
unit weight	ASTM D 5261	oz/yd^2 (g/m^2)	9.26 (315)		b
roll dimension		ft x ft (m x m)	14.76 x 164 (4.5 x 50)		b
roll area		yd^2 (m^2)	269 (225)		b
gross roll weight		lb (kg)	171 (77.7)		b
TECHNICAL CHARACTERISTICS	TEST	UNIT			NOTES
Strengths & Load Capacity:			MD	TD	
peak tensile strength	ASTM D 6637	lb/ft (kN/m)	2,397 (35)	2,397 (35)	a,c,e
true tensile strength: @ 2%strain	ASTM D 6637	lb/ft (kN/m)	548 (8)	685 (10)	a,c,e
@ 5%strain	ASTM D 6637	lb/ft (kN/m)	1,096 (16)	1,342 (19.6)	a,c,e
true initial modulus in use	ASTM D 6637	lb/ft (kN/m)	40,113 (585)	42,853 (625)	a,c,e
true tensile modulus: @ 2%strain	ASTM D 6637	lb/ft (kN/m)	27,400 (400)	34,250 (500)	a,c,e
@ 5%strain	ASTM D 6637	lb/ft (kN/m)	21,920 (320)	26,852 (392)	a,c,e
Structural Integrity:					
junction tensile strength: @ 1% strain	GRI-GG2	lb/ft (kN/m)	274 (4)	274 (4)	a,e
@ 2% strain	GRI-GG2	lb/ft (kN/m)	479.5 (7)	479.5 (7)	a,e
junction tensile modulus: @ 1% strain	GRI-GG2	lb/ft (kN/m)	27,400 (400)	27,400 (400)	a,e
@ 2% strain	GRI-GG2	lb/ft (kN/m)	95,900 (1,400)	95,900 (1,400)	a,e
junction: strength	GRI-GG2	lb/ft (kN/m)	2,229 (32.6)	2,229 (32.6)	a,e
efficiency	GRI-GG2	%	93		a,e
Flexural rigidity	ASTM D 1388	mg-cm	750,000	750,000	b

NOTES: a: Minimum average roll values determined in accordance with ASTM D 4759; b: Typical values; c: Test performed using extensometers; d: Single layer value; e: MD: machine direction (longitudinal to the roll), TD: transverse direction (across roll width)

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