product
specifications

SYNTEC GEOSYNTHETICS

MULTILAYER BI-AXIAL GEOGRIDS
FEATURING TENAX MS 220B

TENAX MS™ 220B is composed of two 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™ 220B geogrid interlocking capacity, distributes applied loads, and prevents localized shear failure.

TYPICAL APPLICATIONS

ÅSoft soil stabilization ÅBase Reinforcement ÅEmbankments over soft soils ÅWorking platforms ÅHaul roads

MATERIAL CHARACTERISTICS	TEST	DATA			
polymer type		polypropylene			
carbon black content	ASTM D 4218	0.5%			
DIMENSIONAL CHARACTERISTICS	TEST	UNIT			NOTES
thickness: rib ï MD/TD	ASTM D 1777	in (mm) / in (mm)	0.05 (1.27) / 0.05 (1.27)		b,d,e
aperture size ï MD/TD		in (mm) x in (mm)	1.65 (42) / 1.96 (50)		b,d,e
open area	CW 02215	%	75		b
roll dimension		ft x ft (m x m)	13.1 x 328 (4.0 x 100)		b
roll area		yd^2 (m^2)	478 (400)		b
gross roll weight		lb (kg)	211 (96)		b
TECHNICAL CHARACTERISTICS	TEST	UNIT			NOTES
Strengths & Load Capacity:			MD	TD	
peak tensile strength	ASTM D 4595	lb/ft (kN/m)	925 (13.5)	1,400 (20.5)	a,c,e
tensile strength: @ 2%strain	ASTM D 4595	lb/ft (kN/m)	301 (4.4)	450 (6.6)	a,c,e
@ 5%strain	ASTM D 4595	lb/ft (kN/m)	616 (9.0)	920 (13.4)	a,c,e
initial modulus	ASTM D 4595	lb/ft (kN/m)	17,140 (250)	27,420 (400)	a,c,e
tensile modulus: @ 2%strain	ASTM D 4595	lb/ft (kN/m)	15,050 (220)	22,500 (328)	a,c,e
@ 5%strain	ASTM D 4595	lb/ft (kN/m)	12,320 (180)	18,400 (269)	a,c,e
Structural Integrity:					
junction: strength, per junction	GRI-GG2	lbs	75		a,e
strength	GRI-GG2	lb/ft (kN/m)	860 (12.5)	1,315 (19.2)	a,e
efficiency	GRI-GG2	%	93		a,e
flexural rigidity	ASTM D 1388	mg-cm	250,000	250,000	b
Durability:					
resistance to installation damage	ASTM D 5818	%SC/%SW/%GP	>90/>90/90		
resistance to UV degradation	ASTM D 4355	%	100		

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)

Manufactured by Tenax Corporation, 4800 E. Monument Street, Baltimore, MD 21205; represented exclusively in the Americas by Syntec, LLC.

SYNTEC
GEOSYNTHETICS EVOLVED

4800 Pulaski Highway, Baltimore, MD 21224, USA
Phone 410.327.1070 800.874.7437
Fax 410.327.1078
www.synteccorp.com

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