

TENAX MS 330

TENAX MS™ 330 is composed of three layers of high strength extruded biaxial 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™ 330 geogrid greatly improves the 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 METHOD	DATA
polymer type		polypropylene
carbon black content	ASTM D 4218	0.50%

DIMENSIONAL CHARACTERISTICS	TEST METHOD	UNIT		NOTES
thickness: junction	ASTM D 1777	in (mm)	0.16 (4.0)	b,d
rib - MD/TD		in (mm) / in (mm)	0.059 (1.5) / 0.059 (1.5)	b,d,e
aperture size		in (mm) / in (mm)	1.65 (42) x 1.96 (50)	b,d,e
open area	CW 02215	%	70	a
unit weight	ASTM D 5261	oz/yd ² (g/m ²)	9.7 (330)	b
roll dimensions		ft x ft (m x m)	12.5 x 164 (3.8 x 50)	b
roll area		yd ² (m ²)	227 (190)	b
gross roll weight		lb (kg)	162 (73.5)	b

TECHNICAL CHARACTERISTICS	TEST METHOD	UNIT			NOTES
			MD	TD	
Strengths & Load Capacity:					
peak tensile strength	ASTM D6637	lb/ft (kN/m)	1,370 (20.0)	2,100 (30.7)	a,c,e
true tensile strength in use: @2% strain	ASTM D6637	lb/ft (kN/m)	418 (6.1)	616 (9.0)	a,c,e
@5% strain	ASTM D6637	lb/ft (kN/m)	925 (13.5)	1,343 (19.6)	a,c,e
true initial modulus in use	ASTM D6637	lb/ft (kN/m)	27,400 (400)	44,525 (650)	a,c,e
true tensile modulus: @ 2% strain	ASTM D6637	lb/ft (kN/m)	20,900 (305)	30,800 (450)	a,c,e
@ 5% strain	ASTM D6637	lb/ft (kN/m)	18,500 (270)	26,852 (392)	a,c,e
Structural Integrity:					
junction tensile strength: @1% strain	GRI-GG2	lb/ft (kN/m)	220 (3.21)	300 (4.35)	a,e
@2% strain	GRI-GG2		365 (5.32)	500 (7.30)	a,e
junction tensile modulus: @1% strain	GRI-GG2	lb/ft (kN/m)	22,000 (321)	30,000 (435)	a,e
@2% strain	GRI-GG2		18,220 (266)	25,000 (365)	a,e
junction: strength	GRI-GG2	lb/ft (kN/m)	1,274 (18.6)	1,970 (28.8)	a,e
efficiency		%	93		a,e
flexural rigidity	ASTM D 1388	mg-cm	750,000	750,000	b
Durability:					
resistance to installation damage	ASTM D 5818	%SC/%SW/%GP	>90/>90/90		f

NOTES: a: 95% lower confidence limit values, ISO 2602; b: Typical values; c: Tests performed using extensometers; d: Single layer value; e: MD: machine direction (longitudinal to the roll), TD: transverse direction (across roll width); f: Tenax report GRID-TE-4: "Construction Damage Tests of Geogrids"