TENAX **MS**

Type: **330**

Multilayer Bi-axial Geogrids

TENAX **MS 330** is composed of three layers of high strength 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 330** 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
UV STABILIZER	ASTM D 4218	CARBON BLACK

DIMENSIONAL CHARACTERISTICS	TEST METHOD	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)	1.65 (42) / 1.96 (50)	b,d,e
OPEN AREA	CW 02215	%	70	b
ROLL DIMENSION		ft x ft (m x m)	13.1 x 164 (4.0 x 50)	b
ROLL AREA		yd² (m²)	239.2 (200)	b
GROSS ROLL WEIGHT		lb (kg)	163 (74)	b

TECHNICAL CHARACTERISTICS	TEST METHOD	UNIT			NOTES
STRENGTHS & LOAD CAPACITY:			**MD**	**TD**	
PEAK TENSILE STRENGTH	ASTM D 6637	lb/ft (kN/m)	1370 (20)	2100 (30.7)	a,c,e
TENSILE STRENGTH AT 2% STRAIN	ASTM D 6637	lb/ft (kN/m)	418 (6.1)	620 (9)	a,c,e
TENSILE STRENGTH AT 5% STRAIN	ASTM D 6637	lb/ft (kN/m)	925 (13.5)	1343 (19.6)	a,c,e
INITIAL MODULUS	ASTM D 6637	lb/ft (kN/m)	27420 (400)	44500 (650)	a,c,e
TENSILE MODULUS AT 2% STRAIN	ASTM D 6637	lb/ft (kN/m)	20900 (305)	30800 (450)	a,c,e
TENSILE MODULUS AT 5% STRAIN	ASTM D 6637	lb/ft (kN/m)	18500 (270)	26852 (392)	a,c,e
STRUCTURAL INTEGRITY:					
JUNCTION: STRENGTH	GRI-GG2	lb/ft (kN/m)	1274 (18.6)	1970 (28.8)	a,e
JUNCTION: EFFICIENCY	GRI-GG2	%	93		a,e
FLEXURAL RIGIDITY	ASTM D 1388	mg-cm	750000	750000	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)

The TENAX Laboratory has been operational since 1980 and has been continuously improved with the purpose of assuring unequalled technical development of the products and accurate Quality Control.
The TENAX Laboratory can perform mechanical, hydraulic and durability tests, according to the most important international standards like ISO, CEN, ASTM, DIN, BSI, UNI.

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