

TMP GEOSYNTHETICS – Triaxial Geogrid SX16

Introduction

◆ TMP Triaxial geogrid is manufactured through multi-directional stretch with polypropylene as raw material.

◆ Triaxial geogrid has high tensile strength and stiffness in multi-radial orientations. The products are structured by a triangular network of ribs. Compared to the square structure of biaxial geogrids, triaxial geogrids have better structural rigidity and stability with high tensile radial secant stiffness properties.

Properties

- ◆ Stable triangular structure, effectively resist deformation.
- ◆ Resist loads from different directions, high plan torsion resistance.
- ◆ Resist slippage with soil, better performance of soil reinforcement.
- ◆ High junction efficiency.

Applications

- Base reinforcement ■ Subgrade stabilization ■ Subbase stabilization ■ Embankment stabilization
- Geogrids should be covered within one month after installation.
- Durability predicted to be durable for a minimum 50 years in natural soils with $4 < \text{pH} < 9$ and soil temperatures $< 25^\circ\text{C}$.

Specifications

Index Properties	Units	MD Values	RD Values	D Values
■ Polymer	–	PP	–	–
■ Minimum Carbon Black	%	2	–	–
■ Rib pitch (nominal)	mm	40	40	40
■ Mid-rib depth	mm		1.6	1.4
■ Mid-rib width	mm		1.0	1.20
■ Rib shape	–	Rectangular		
■ Aperture shape	–	Triangular		
■ Mass	g/m ²	225(–40)		

Structural Integrity (ASTM D7737 & ASTM D6637)

■ Junction Efficiency	%	95	95	95
■ Aperture stability @ 5.0kg–cm (2)	kg–cm/deg	3.6	–	–
■ Radial Secant Stiffness @ 0.5% strain (Declared Mean Value/Tolerance)	kN/m	410 (–60)	–	–
■ Radial Secant Stiffness @ 2.0% strain (Declared Mean Value/Tolerance)	kN/m	300 (–60)	–	–
■ Ultimate Tensile Strength	kN/m	22	14	
■ Strain @ Ultimate Tensile Strength	%	12	10	–
■ Radial Secant Stiffness Ratio at 0.5% strain	–	0.85		

Dimensions

■ Roll Width	m	3.95	–	
■ Roll Length	m	50	–	

TMP laboratory is regularly monitoring production for the purpose of assuring reliable quality. TMP Geosynthetics reserves the right to change the product specifications at any time as part of its continual improvement and development policy.

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Introduction

◆ TMP Triaxial geogrid is manufactured through multi-directional stretch with polypropylene as raw material.

◆ Triaxial geogrid has high tensile strength and stiffness in multi-radial orientations. The products are structured by a triangular network of ribs. Compared to the square structure of biaxial geogrids, triaxial geogrids have better structural rigidity and stability with high tensile radial secant stiffness properties.

Properties

- ◆ Stable triangular structure, effectively resist deformation.
- ◆ Resist loads from different directions, high plan torsion resistance.
- ◆ Resist slippage with soil, better performance of soil reinforcement.
- ◆ High junction efficiency.

Applications

- Base reinforcement ■ Subgrade stabilization ■ Subbase stabilization ■ Embankment stabilization
- Geogrids should be covered within one month after installation.
- Durability predicted to be durable for a minimum 50 years in natural soils with $4 < \text{pH} < 9$ and soil temperatures $< 25^{\circ}\text{C}$.

Specifications

Index Properties	Units	MD Values	XD Values	D Values
■ Polymer	–	PP	–	–
■ Minimum Carbon Black	%	2	–	–
■ Rib pitch (nominal)	mm	40	40	40
■ Mid-rib depth	mm		1.6	1.4
■ Mid-rib width	mm		1.0	1.20
■ Rib shape	–	Rectangular		
■ Aperture shape	–	Triangular		
■ Mass	g/m ²	260 (–40)		

Structural Integrity (ASTM D7737 & ASTM D6637)

■ Junction Efficiency	%	95	95	95
■ Aperture stability @ 5.0kg–cm (2)	kg–cm/deg	3.6	–	–
■ Radial Secant Stiffness @ 0.5% strain (Declared Mean Value/Tolerance)	kN/m	510 (–60)	–	–
■ Radial Secant Stiffness @ 2.0% strain (Declared Mean Value/Tolerance)	kN/m	390 (–60)	–	–
■ Ultimate Tensile Strength	kN/m	24	16	
■ Strain @ Ultimate Tensile Strength	%	12	10	–
■ Radial Secant Stiffness Ratio at 0.5% strain	–	0.85		

Dimensions

■ Roll Width	m	3.95	–	
■ Roll Length	m	50	–	

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TMP GEOSYNTHETICS – Triaxial Geogrid SX18

Introduction

◆ TMP Triaxial geogrid is manufactured through multi-directional stretch with polypropylene as raw material.

◆ Triaxial geogrid has high tensile strength and stiffness in multi-radial orientations. The products are structured by a triangular network of ribs. Compared to the square structure of biaxial geogrids, triaxial geogrids have better structural rigidity and stability with high tensile radial secant stiffness properties.

Properties

- ◆ Stable triangular structure, effectively resist deformation.
- ◆ Resist loads from different directions, high plan torsion resistance.
- ◆ Resist slippage with soil, better performance of soil reinforcement.
- ◆ High junction efficiency.

Applications

- Base reinforcement ■ Subgrade stabilization ■ Subbase stabilization ■ Embankment stabilization
- Geogrids should be covered within one month after installation.
- Durability predicted to be durable for a minimum 50 years in natural soils with $4 < \text{pH} < 9$ and soil temperatures $< 25^{\circ}\text{C}$.

Specifications

Index Properties	Units	MD Values	RD Values	D Values
■ Polymer	-	PP	-	-
■ Minimum Carbon Black	%	2	-	-
■ Rib pitch (nominal)	mm	40	40	40
■ Mid-rib depth	mm		1.6	1.4
■ Mid-rib width	mm		1.0	1.20
■ Rib shape	-	Rectangular		
■ Aperture shape	-	Triangular		
■ Mass	g/m ²	360(-40)		

Structural Integrity (ASTM D7737 & ASTM D6637)

■ Junction Efficiency	%	95	95	95
■ Aperture stability @ 5.0kg-cm (2)	kg-cm/deg	3.6	-	-
■ Radial Secant Stiffness @ 0.5% strain (Declared Mean Value/Tolerance)	kN/m	580 (-60)	-	-
■ Radial Secant Stiffness @ 2.0% strain (Declared Mean Value/Tolerance)	kN/m	430 (-60)		
■ Ultimate Tensile Strength	kN/m	25	17	
■ Strain @ Ultimate Tensile Strength	%	12	10	-
■ Radial Secant Stiffness Ratio at 0.5% strain	-	0.86		

Dimensions

■ Roll Width	m	3.95	-	
■ Roll Length	m	50	-	

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TMP GEOSYNTHETICS – Triaxial Geogrid SX190L

Introduction

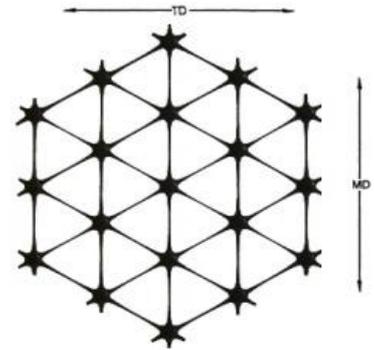
- ◆ TMP Triaxial geogrid is manufactured through multi-directional stretch with polypropylene as raw material.
- ◆ Triaxial Geogrid has high tensile strength in 0°, 60° and 120°. The products are structured by triangle network. Compared to the square structure of biaxial geogrid, triaxial geogrid has better structural rigidity and stability with high tensile radial secant stiffness properties.

Properties

- ◆ Stable triangular structure, effectively resist deformation;
- ◆ Resist loads from different directions, high plan torsion resistance;
- ◆ Resist slippage with soil, better performance of soil reinforcement;
- ◆ High junction efficiency.

Applications

- Base reinforcement ■ Subgrade stabilization ■ Embankment stabilization



Specifications

Index Properties	Test Method	Units	Declared Value	Tolerance
■ Minimum Carbon Black		%	2	
■ Rib pitch		mm	60	±6
■ Hexagon Pitch		mm	120	±6
■ Weight of product		g/m ²	360	-60

Structural Integrity

■ Radial Secant Stiffness @ 0.5% strain	ASTM D 6637	kN/m	540	-90
■ Radial Secant Stiffness @ 2% strain	ASTM D 6637	kN/m	420	-100
■ Junction Efficiency	ASTM D 7737 & 6637	%	100	-5
■ Radial Secant Stiffness Ratio		-	0.86	0.15

Durability

■ Resistance to Weathering	EN1224	%	100	-5
■ Resistance to Oxidation	EN ISO 13438	%	100	-5

28 days in water at 80° C followed by 56 days
in air at 100° C

- To be covered one month from the date of installation. Predicted to be durable for a minimum 50 years in natural soils with 4 < pH < 9 and soil temperatures < 25°C.

Dimensions

■ Roll Width	-	m	3.95	
■ Roll Length	-	m	50	

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