terrafix® geosynthetics inc. | TTX G160

Terrafix Triangular Geogrid TTX - G160

TTX-G160 is a polypropylene single layer extruded in a three-dimensional direction. This engineered geogrid is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew, and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geogrids today. This is geocomposite product made by geogrid and non-woven geotextile. TTX-G160 is manufactured to meet the following minimum average roll values:

PROPERTY	TEST METHOD	LONGITUDINAL	DIAGONAL	GENERAL
Index Properties				
Rib pitch, mm(in)	ASTM D4759	40 (1.60)	40 (1.60)	
Mid-rib depth, mm(in)	ASTM D4759	1.6 (0.08)	2.0 (0.08)	
Mid-rib width, mm(in)	ASTM D4759	1.3 (0.05)	1.0 (0.04)	
Rib Shape	ASTM D4759			Rectangular
Aperture Shape	ASTM D4759			Triangular
Mechanical Properies				
Radial Stiffness at 0.5% strain (kN/m)	ASTM D7737-11			315
Radial Stiffness at 2.0 strain (kN/m)	ASTM D7737-11			225
Radial Stiffness Ratio	ASTM D6637			0.65
Junction Efficiency %	ASTM D7737			93
Resistance to Chemical Degradation	EPA 9090			100%
Resistance to UV Degradation	ASTM D4355			70 % @ 500 hrs

TTX-G160 (WITH GEOTEXTILE)	TEST METHOD	UNIT	METRIC
Grab Tensile Strength	ASTM D4632	kN	0.711
Grab Elongation	ASTM D4632	%	50
Trapezoid Tear Strength	ASTM D4533	kN	0.267
CBR Puncture Resistance	ASTM D6241	kN	1.823
Permittivity	ASTM D4491	sec^{-1}	1.5
Water Flow	ASTM D4491	$L/min/m^2$	4480
Apparent Opening Size (AOS)5	ASTM D4751	mm	0.212
UV Resistance (500hrs)	ASTM D4355	%	70
Roll Dimensions, width x length	—	m	3.9 x 50

1 At the time of manufacturing. Handling, storage, and shipping may change these properties.
2 Value represents maximum average roll value.

Index Properties:
Geogrid testing values in accordance with ASTM D4759 (minimum average roll values) in accordance with test methods EOTA TR041 and ISO 10319 at the temperature of 21±1°C

Mechanical properties:
*ASTM D6637-10 and ASTM D7737-11: Junction efficiency %. Load transfer capability is determined as a percentage of ultimate tensile strength.
**ASTM D6637-10: radial stiffness at low strain, kN/m @ 0.5% strain (lb/ft @ 0.5% strain). Radial stiffness is determined from tensile stiffness measured in any in-plane axis. Stiffness Ratio: The ratio between the minimum and maximum observed values of radial stiffness at 0.5% strain, measured on rib and midway between rib directions.
***EPA 9090: Resistance to chemical degradation. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments including acids, alkalis and salts, normally found in soils. Also, it is not a nutrient, therefore, these products will not be affected by micro-organisms in soil.
****ASTM D4355-05: Resistance to ultra-violet light and weathering. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering.