

**TGC4040-6** *Biaxial Composite Geogrid*

Terrafix TGC4040 is a Polypropylene Monolithic Extruded Biaxial Geogrid bonded with a non-woven geotextile, resulting in a geogrid that provides separation, filtration, interaction, confinement, and reinforcement. Used as an effective base reinforcement and subgrade improvement, Terrafix TGC4040 is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids. Polypropylene is stable within a pH range of 2 to 13.

Property	ASTM Test Method	Machine Direction Strength (MD)	Cross Machine Direction Strength (XMD)
<b>Geogrid Mechanical Properties</b>			
• Ultimate Tensile Strength <sup>(2)</sup>	D 6637	40.0 kN/m	40.0 kN/m
• Junction Strength <sup>(2)</sup>	GRI-GG2	37.2 kN/m	37.2 kN/m
• Junction Efficiency	%	95%	95%
• Tensile Strength @ 2% Strain <sup>(2)</sup>	D 6637	14.0 kN/m	14.0 kN/m
• Tensile Strength @ 5% Strain <sup>(2)</sup>	D 6637	28.0 kN/m	28.0 kN/m
• Flexural Stiffness/Rigidity	D 7748	4,800,000 mg-cm	4,800,000 mg-cm
• Radial Stiffness @0.5% Strain	D 6637	53,000 lb/ft /	773 kN/m
• Aperture Stability <sup>(1)</sup>	COE	0.98 M-n/deg. @ 20kg-cm torque	
<b>Geotextile Physical Properties</b>			
• Mass per unit area	D 5261	200 gm/cm <sup>2</sup>	
• Tensile Elongation	D 4595	50%	
• CBR Puncture Strength	D 6241	2300N	
• Apparent Opening Size	D 4751	0.11mm	
<b>Roll Properties</b>			
• Aperture Size	--	34mm (±1mm)	34mm (±1mm)
• Average Rib Thickness	D1777	3.4mm	2.1mm
• Roll Size	--	50m	3.95m
<b>Typical Geogrid Properties</b>			
• Minimum Carbon Black Content	D 4218	2%	2%
• Resistance to UV Degradation	D 4355	100%	

<sup>(1)</sup> In-plane torsional rigidity measured by applying a moment to the central junction of a 225mm x 225mm specimen restrained at its perimeter in accordance with U.S. Army Corps of Engineers Methodology for measurement of Torsional Rigidity (Kinney, T.C. Aperture Stability Modulus ref 3, 3.1.2000)

<sup>(2)</sup> Values shown are MARV as per GRI.