

## Gird® PETCM Series PET Biaxial Composites Geogrid

G-Grid® PETCM series are geocomposites manufactured by PET Bi-axial Geogrid heat bonded with needle punched nonwoven geotextile. Geogrid provides soil reinforcement and the nonwoven geotextile provides separation and filtration. The high elongation capacity of nonwoven geotextile ensures that the interlocking ability between the composite geogrid and the filling material is not reduced and stress is transferred to the geogrid. Features: Versatile, High tensile strength:

Applications: Retaining structures, basal reinforcement, piling platforms, subgrade improvement.

Typical Properties	Value Type	Unit	PETBC 40/40	PETBC 60/B0	PETBC C80/80	PETBC 100/100	PETBC 130/130	PETBC 160/160	PETBC 200/200	PETBC 400/400	PETBC 600/600	PETBC 800/800	PETBC 1000/1000
Geogrid Properties													
Polymer			PET, white/black										
Coating			SBR / PVC										
Tensile strength,MD/CD [ISO 10319 / ASTM D6637]	Typical	kN/m	40	60	80	100	130	160	200	400	600	800	1000
Elongation, MD / CD [ISO 10319 / ASTM D6637]	Typical	%	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10	≤10
Tensile strength at 5% elongation, MD/CD [ISO 10319 / ASTM D6637]	Typical	kN/m	≥25	≥39	≥52	≥65	≥83	≥107	≥128	≥260	≥395	≥525	≥680
Material reduction factor creep-rupture, f <sub>cr</sub>													
Reduction factor - creep 50 years, MD/CD [ASTM D 4595]	-	-	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Reduction factor - creep 100 years, MD/CD [ASTM D 4595]	-	-	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Creep limited strength based on creep-rupture, T <sub>cr</sub>													
at 50 years design life, MD/CD	Typical	kN/m	29	43	57	71	93	114	143	286	429	571	714
at 100 years design life, MD/CD	Typical	kN/m	28	42	56	70	91	112	140	280	420	560	700
Material reduction factor - installation damage, f <sub>id</sub>													
in clay, silt or sand [ASTM D5818 or ISO 10722]	-	-	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
in gravel (125mm max size)	-	-	1.15	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Material reduction factor - environmental effects (4 < pH < 9), f <sub>en</sub>													
at 50 years design life	-	-	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
at 100 years design life	-	-	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Width Deviation	Typical	%	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Aperture Dimensions. MD x CD	Typical	mm	15 ≤ MD ≤ 60 , 15 ≤ CD ≤ 60										
UV-resistance [ASTM D 4355(500 hrs)]	Typical	%	>90	>90	>90	>90	>90	>90	>90	>90	>90	>90	>90
Geotextile Properties	Value	Unit	EV-0-9										
Grab Strength [ASTM D 4632/AS3706.2]	Typical	N	≥500										
G Rating [Austroads]	Typical	-	≥890										
Permittivity [ASTM D 4491/AS3706.9]	Typical	Sec <sup>-1</sup>	≥2.7										
Composites Properties	Value Type	Unit	PETBC 40/40	PETBC 60/B0	PETBC C80/80	PETBC 100/100	PETBC 130/130	PETBC 160/160	PETBC 200/200	PETBC 400/400	PETBC 600/600	PETBC 800/800	PETBC 1000/1000
Geotextile Bitumen Retention [ASTM D 6140]	Typical	L/m <sup>2</sup>	0.5~0.7										
Peel Strength [ASTM D 6496]	Typical	N/m	According to customization										
Physical Identification Properties													
Grade	T	g/m <sup>2</sup>	PETBC 40/40	PETBC 60/B0	PETBC C80/80	PETBC 100/100	PETBC 130/130	PETBC 160/160	PETBC 200/200	PETBC 400/400	PETBC 600/600	PETBC 800/800	PETBC 1000/1000
Roll Width	T	m(<=)	According to customization										
Roll Length	T	m	According to customization										
Approx Load Q'ty / 40' HQ		Rolls(>=)	-	-	-	-	-	-	-	-	-	-	-
		Sq. m	-	-	-	-	-	-	-	-	-	-	-

(1) Tensile strength in terms of characteristics (95th percentile) values, which are statistically safe values

(2) The data was obtained from in-house test laboratory, National test institutes and international test institutes. GeoTrans keeps the right of data changes and the final explanation right. Liability Exclusion: This publication should not be construed as engineering advice. While information contained here is accurate to the best of our knowledge, GeoTrans does not warrant its accuracy or completeness. The only warranty made by GeoTrans for its products is set forth in our Product Test Report accompanies our shipment of the products, or such other written warranty as may be agreed by GeoTrans and customer. GeoTrans specifically disclaims all other warranties express or implied, including without agreed by GeoTrans and customer. GeoTrans specifically disclaims all other warranties, express or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, or rising from provision of samples, a course of dealing or usage of trade.



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