# TE-BXC40
## BI-AXIAL GEOGRID COMPOSITE

Titan's TE-BXC is a composite made of bi-axial polypropylene (PP) geogrid, heat bonded to a long fiber non-woven polyester geotextile that acts as a filter and soil separator. This geogrid is manufactured using a punching and drawing process whereby the polypropylene sheet is stretched in two directions, machine (longitudinal) and cross-machine (transverse). The result is a monolithic and isotropic geogrid with thick and wide ribs, thick integral nodes, and uniform square apertures. Engineered to be mechanically and chemically stable in aggressive soil environments, TE-BXC allows sub-base drainage to help maintain structural stability, and is very effective in keeping expensive imported material from being contaminated by migration of fines from the saturated base soils.

| TESTED PROPERTY | TEST METHOD | UNIT ENGLISH (METRIC) | VALUE ENGLISH (METRIC) | |
|---|---|---|---|---|
| **BI-AXIAL GEOGRID** | | | **MD** | **XD** |
| Carbon Black Content | ASTM D 4218 | % | 2.0 | |
| Ultimate Tensile Strength[1] | ASTM D 6637 | lbs/ft (kN/m) | 2,742 (40.0) | 2,742 (40.0) |
| Tensile Strength at 2% strain[1] | ASTM D 6637 | lbs/ft (kN/m) | 960 (14.0) | 960 (14.0) |
| Tensile Strength at 5% strain[1] | ASTM D 6637 | lbs/ft (kN/m) | 1,919 (28.0) | 1,919 (28.0) |
| Junction Efficiency[2][3] | ASTM D 7377 GRI-$GG_2$ | % | >95 | |
| Flexural Rigidity[1] | ASTM D 7748 | mg-cm | 3,500,000 | |
| Aperture Stability[2][4] | US. COE | m-N/deg | 0.9 | |
| Minimum Rib Thickness | Callipered | inch (mm) | 0.09 (2.3) | 0.06 (1.7) |
| Aperture Size[2][5] | Nominal | inch (mm) | 1.45 (37.0) | 1.45 (37.0) |
| **NON-WOVEN GEOTEXTILE** | | | | |
| Raw Material | Polyester, Continuous filament, needle punched | | | |
| Ultimate Tensile Strength[1] | ASTM D 4595 | lbs/ft (kN/m) | 781 (11.4) | 781 (11.4) |
| Grab Strength[1] | ASTM D 4632 | lbs (kN) | 146 (0.65) | |
| Trapezoidal Tear[1] | ASTM D 4533 | lbs (kN) | 67 (0.30) | |
| Elongation at Ultimate[2] | ASTM D 4595 | % | 60 | 60 |
| CBR Burst Strength[1] | ASTM D 6241 | lbs (kN) | 540 (2.4) | |
| Permeability | ASTM D 4491 | cm/sec | 2.28 | |
| Apparent Opening Size $O_{95}$ | ASTM D 4751 | mm | 0.18 | |
| Mass Per Unit Area[2] | ASTM D 5261 | oz/$yd^2$ (g/$m^2$) | 6.0 (200) | |
| **TYPICAL ROLL DIMENSIONS** | | | | |
| Roll Width | | ft (m) | 12.79 (3.9) | |
| Roll Length[6] | | ft (m) | 164.04 (50.0) | |

NOTES:
(1) Minimum Average Roll Values (MARV) – calculated as (mean minus 2X standard deviation
(2) Average
(3) Junction efficiency is defined as junction strength divided by multi-rib strength
(4) Resistance to in plane rotational movement measured at an applied momen = 2m-N (20kg-cm) in accordance with US Army Corps of Engineers methodology for the measurement of Torsional rigidity
(5) Aperture tolerance: within +/- 10% coefficient of variance
(6) Custom length orders can be accommodated.



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