

ROADRAIN -T 7100-2

The drainage geocomposite is comprised of a tri-planar geonet structure with thermally bonded nonwoven geotextiles on both sides. This product is capable to quickly remove subsurface water from the pavement. The product provides a void-maintaining system to work as a capillary break; it also works as a separation and base reinforcement layer and will have properties conforming to the values and test methods listed below.

PROPERTY	TEST METHODS	UNITS	VALUE	QUALIFIER	TEST FREQUENCY
Resin					
• Density	ASTM D 1505	g/cm ³	0.94	MAV	lot
• Melt Flow Index	ASTM D 1238	g/10 min	1.0	MAX	lot
Geonet Core¹					
• Structure ²	Triplanar Void Maintaining Structure				
• Geonet Cross-Rib Spacing	Calibered	inch (mm)	0.43 (11.0)	MAX	50,000 sf
• Geonet Main-Rib Spacing	Calibered	inch (mm)	0.39 (10.0)	typical	50,000 sf
• Unsupported Aperture Area		inch ² (mm ²)	0.25 (162)	MAX	50,000 sf
• Thickness	ASTM D 5199	mil (mm)	300 (7.6)	± 10 %	50,000 sf
• Carbon Black	ASTM D 4218	%	1.0 - 3.0	Range	50,000 sf
Nonwoven Geotextile^{1,3}					
• U.V. Resistance (500 hrs)	ASTM D 4355	%	70		Per formula
• Serviceability Class	AASHTO M-288		Class 1		
• Grab Tensile	ASTM D 4632	lbs (N)	202 (900)	MARV	100,000 sf
• Grab Elongation	ASTM D 4632	%	50	MARV	100,000 sf
• Tear Strength	ASTM D 4533	lbs (N)	79 (350)	MARV	100,000 sf
• Puncture Resistance	ASTM D 4833	lbs (N)	110 (490)	MARV	100,000 sf
• AOS	ASTM D 4751	US Sieve (mm)	80 (0.18)	MaxARV	500,000 sf
• Permittivity	ASTM D 4491	Sec ⁻¹	1.0	MARV	500,000 sf
Geocomposite					
• Peel Adhesion – MD	ASTM D 7005	lb/in (g/in)	1.0 (454)	MAV	100,000 sf
Hydraulic Properties					
Load of 15,000 psf at gradient of 0.02					
• Transmissivity ⁴ - flow in the main rib direction	ASTM D 4716 GRI - GC8	m ² /sec (gpm/ft)	1.5 E-3 (7.25)	MAV	200,000 sf
• Coefficient of Permeability ⁵ - flow in the main-rib direction	ASTM D 4716 GRI - GC8	m/sec (ft/day)	0.25 (70,800)	MAV	200,000 sf

Qualifiers: MARV=Minimum Average Roll Value (MARV), MAV=Minimum Average Value, MAX=Maximum Value, MaxARV=Maximum average roll value.

NOTES: **1.** Geonet and Geotextile properties listed are prior to fabrication process. **2.** Geonet structure consists of thick main-ribs with diagonally placed top and bottom-ribs. Void maintaining structure is determined by both the dry and wet methods (see Tenax technical document TDD020 for test method description.) **3.** Geotextile exceeds AASHTO Standard Specification M 288 strength requirements of class 1. **4.** Geocomposite transmissivity and flow rate are measured per ASTM D4716 with testing boundary conditions as follows: steel plate / Ottawa sand / geocomposite / Ottawa sand / steel plate, and seating period of 100 hours according to GRI-GC8. Digital gradient indicator of hydraulic gradient is required during the transmissivity measurement **5.** Coefficient of permeability is calculated with the measured geocomposite transmissivity and the retained geonet core thickness under the corresponding normal load.