





REINFORCEMENT



## MIRAFI RS580i

MIRAFI® RS580*i* is a specially designed geosynthetic that integrates the key performance characteristics to maximize performance. Extensive performance testing has been performed per AASHTO and FHWA guidelines to validate performance for both paved and unpaved roads. The patented weave pattern and unique Orange identifier yarn make the MIRAFI RS580*i* a unique performance geotextile. TenCate Geosynthetics Americas (A Solmax Company) is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MIRAFI RS580i meets Build America, Buy America Act, Pub. L. No. 117-58, div. G §§ 70901-52.

ROADWAY DESIGN and PERFORMANCE PROPERTIES	GUIDANCE DOCUMENT / TEST METHOD	UNIT	DESIGN / CALIBRATION VALUE	
Base Course M <sub>R</sub> Improvement Factor <sup>1</sup>	AASHTO R50-09		1.40 9,000 (62)	
Subgrade M <sub>R</sub> Improvement / Increase <sup>2</sup>	AASHTO R50-09	lbs/in² (MPa)		
Traffic Benefit Ratio: TBR 4,5,6	AASHTO R50-09		9.0 / 13.1 / 39.0	
			MD	CD
Cyclic Tensile Modulus @ 2% Permanent Strain: J <sub>cyclic</sub> (MARV)	ASTM D7556	lbs/ft (kN/m)	54,434 (809)	120,940 (1765
Resilient Interface Shear Stiffness: GI <sup>3</sup> Interaction Coefficient: Ci <sup>7</sup>	ASTM D7499	kip/in² (MPa)	329 (2,268) 0.90	
Pore Pressure Dissipation Ratio <sup>4</sup>			2.0	
			O <sub>95</sub>	- 394
Average Dynamic Filtration Pore Size	ASTM D6767	microns	O <sub>85</sub> -330	
	ASTIVI DOTOT	HILLIOHS	O <sub>60</sub> - 248	
			O <sub>50</sub> - 208	
Maximum Percent Open Area: MPOA <sup>8</sup>	ASTM D6767	%	7.3	
			MD	CD
Tensile Strength (at 2% strain)	ASTM D4595	lbs/ft (kN/m)	480 (7.0)	1,800 (26.3)
Tensile Strength (at 5% strain)	ASTM D4595	lbs/ft (kN/m)	1,440 (21.0)	4,380 (63.9)
Grab Tensile (MARV)	ASTM D4632	lb (N)	625 (2781)	525 (2336)
CBR (MARV)	ASTM D6241	lb (N)	1950 (8678)	
INDEX PROPERTIES	TEST METHOD	UNIT	MAXIMUM ROLL VALUE	
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	40 (0.425)	
			MINIMUM AVERAGE ROLL VALUE	
Hydraulic Flow Rate	ASTM D4491	gal/min/ft² (l/min/m²)	75 (3,056)	
Permittivity	ASTM D4491	sec <sup>-1</sup>	=	1.0
			MINIMUM TEST VALUE	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained		90

365 South Holland Drive Pendergrass, GA 30567

Tel +1 706 693 2226 www.tencategeo.us







PHYSICAL PROPERTIES	UNIT	Roll Size	
Dell Dimensions (width y length)	ft (m)	15 x 300 (4.5 x 91)	
Roll Dimensions (width x length)		17 x 300 (5.2 x91.4)	
Roll Area	, rd2 (ra2)	500 (418)	
Roll Ared	yd² (m²)	567 (474)	
Estimated Ball Weight	lbs (kgs)	404 (183)	
Estimated Roll Weight		458 (207)	

## Notes:

- <sup>1</sup> Value Determined from Results of Independent Testing Performed at Kansas State University in accordance with NCHRP Report 512 "Accelerated Pavement Testing: Data Guidelines" and AASHTO R50-09 Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures." Multiplier for Unbound Granular Material; for SG MR between 4.5 and 6.9 ksi (30.9 and 47.4 MPa).
- <sup>2</sup> Value Determined from Results of Independent Testing Performed at GeoTesting Express (GeoComp) "A Laboratory Evaluation of the Performance of TenCate Mirafi® Geosynthetics in Roadway Stabilization Applications Georgia Silt Subgrade," September 1, 2011. 9-kip {40 kN} Wheel Load, SG CBR = 1%, 12-inch (300-mm) Crushed Aggregate BC (CBR > 25%), 3-inch (75-mm) Rut Depth.
- <sup>3</sup> Value Determined from Results of Independent Testing Performed at LTRC "Performance of Reinforced–Stabilized Unpaved Test Sections Built Over Native Soft Soil Under Full-Scale Moving Wheel Loads," TRR Volume 2511, 2015. Measured at 0.34-inch (8.64 mm) Rut Depth; Peak Pore Pressure 6-inches (150 mm) Below Geosynthetic.
- <sup>4</sup> Value Determined from Results of Independent Testing Performed at GeoTesting Express (GeoComp) "A Laboratory Evaluation of the Performance of TenCate Mirafi® Geosynthetics in Roadway Stabilization Applications Montana Clay Subgrade," September 1, 2011. 9-kip (40 kN) Wheel Load, SG CBR = 1.8%, 8-inch (200-mm) Rounded Aggregate BC (CBR > 25%), 3-inch (75-mm) Rut Depth.
- <sup>5</sup> Interaction Coefficient value is for sand (SP) or gravel (GW) based on testing conducted by SGI Testing Services.

## U.S. Patent 8,333,220 and 8,598,054

TenCate, Mirafi, and the color ORANGE used in connection with geosynthetic or geotextile products are registered and/or unregistered trademarks of Nicolon Corporation.

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