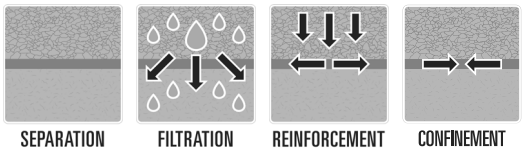
TENCATE Mirafi®



Mirafi® RS580*i*

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 is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

ROADWAY DESIGN and PERFORMANCE PROPERTIES	GUIDANCE DOCUMENT / TEST METHOD	UNIT	DESIGN / CALIBRATION VALUE	
Base Course M_R Improvement Factor[1]	AASHTO R50-09	--	1.40	
Subgrade M_R Improvement / Increase[2]	AASHTO R50-09	lbs/in^2 (MPa)	9,000 (62)	
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_{cyclic} (MARV)	ASTM D7556	lbs/ft (kN/m)	54,434 (809)	120,940 (1765)
Resilient Interface Shear Stiffness: GI[3]	ASTM D7499	kip/in2 (MPa)	329 (2,268)	
Interaction Coefficient: C_i[7]			0.90	
Pore Pressure Dissipation Ratio[4]			2.0	
Average Dynamic Filtration Pore Size	ASTM D6767	microns	O_{95} - 394 O_{85} -330 O_{60} - 248 O_{50} - 208	
Maximum Percent Open Area: MPOA[8]	ASTM D6767	%	7.3	
			MD	CD
Tensile Strength at 2% strain (MARV)	ASTM D4595	lbs/ft (kN/m)	480 (7.0)	1,800 (26.3)
Tensile Strength at 5% strain (MARV)	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	

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/ft^2 (l/min/m^2)	75 (3,056)
Permittivity	ASTM D4491	sec^{-1}	1.0
			MINIMUM TEST VALUE
UV Resistance (at 500 hours)	ASTM D4355	% strength	90

365 South Holland Drive
Pendergrass, GA 30567
Tel +1 706 693 2226
www.tencategeo.us

NTPEP NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM
GMA Geosynthetic Materials Association
QUALITY ASSURANCE ACCREDITED LABORATORY GAI-LAP-25-97
TENCATE GEOSYNTHETICS

PHYSICAL PROPERTIES	UNIT	Roll Size
Roll Dimensions (width x length)	ft (m)	15 x 300 (4.5 x 91) 17 x 300 (5.2 x91.4)
Roll Area	yd^2 (m^2)	500 (418) 567 (474)
Estimated Roll Weight	lbs (kgs)	270 (122.5)
Label Roll Color		

Notes:

[1] 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).

[2] Value Determined from Results of Independent Testing and Geosynthetic Calibrations to AASHTOWare ME Reported by NCHRP 01-50 "Quantifying the Influence of Geosynthetics on Pavement Performance." Subgrade MR Increase for SG MR between 5 and 25 ksi (69 and 172 MPa).

[3] Value Determined from Results of Independent Testing and Geosynthetic Calibrations Reported by WTI / MTSU "Relative Operational Performance of Geosynthetics Used as Subgrade Stabilization." Cyclic Tensile Modulus Measured at 2% Permanent Strain; Resilient Interface Shear Stiffness Normal Stress = 5.08 psi (35 kPa); Interface Shear Stress = 0.73 psi (5 kPa).

[4] 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.

[5] 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.

[6] 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.

[7] Interaction Coefficient value is for sand (SP) or gravel (GW) based on testing conducted by SGI Testing Services.

[8] Maximum Value Determined from Specimen Results of Independent Testing Performed at TRI Environmental, Various dates.

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

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365 South Holland Drive
Pendergrass, GA 30567
Tel +1 706 693 2226
www.tencategeo.us