

CIVIL GEOTEXTILE APPLICATION CARD

APPLICATION	DESCRIPTION	SCHEMATIC	APPLICATION PHOTOS
Separation/Stabilization • Unpaved roads and work pads • Paved roads and parking lots	Geotextile placed between subgrade soil and base aggregate in paved and unpaved roadways to preserve the road foundation through separation and to strengthen the layers through stabilization. Recommended: GEOTEX® 801	Without With Geotextile Geotextile	
Subsurface Drainage • French drains • Blanket drains • Pipe filter wrap	Geotextile filter around drainage media to permit the free flow of water while retaining soil particles behind the geotextile and preventing contamination of the drainage system. Recommended: GEOTEX® 401	Berm Pavement Geotextile Aggregate Pipe	
Permanent Erosion Control Riprap Articulated Concrete Blocks Concrete Geotextile	Geotextile separation and filtration between subgrade soil and hard armoring such as rock riprap and articulated concrete blocks (ACBs). Recommended: GEOTEX® 1001	Geotextile	
Asphalt Overlay • New or rehabilitated roads • Parking lots	Geosynthetic interlayers providing a moisture barrier against water intrusion and a stress absorbing membrane to retard reflective cracking. Petromat recommended for full width pavements and Petrotac recommended for strip treatments and bridge decks. Recommended: PETROMAT®	PETROMAT® Tack Coat Cracked, Distressed Pavement Aggregate Base Subgrade	
Unbonded Concrete Interlayer • Between pavement and PCC slab • Between treated base and PCC slab	Reflectex nonwoven takes the place of permeable asphalt concrete as the required interlayer beneath unbonded concrete overlays over existing pavement or over treated bases. Recommended: REFLECTEX®	Concrete Overlay Geotextile Interlayer Existing Concrete	

- 1. For information on why the nonwoven geotextiles are more highly recommended, please refer to the Engineering Bulletin "Woven versus Nonwoven Geotextiles, Which is Best for Your Project" on our website at www.propexglobal.com
- 2. For more information on these geosynthetic applications along with information on silt fence, slope/wall reinforcement, rolled erosion control products, and fibers in concrete, please refer to our website at www.propexglobal.com

			GEOTEX® 401 Subsurface Drainage	GEOTEX® 801 Separation/Stabilization	GEOTEX® 1001 Permanent Erosion Control
GEOTEX® NONWOVEN	PERFORMANCE PROPERTY	TEST METHOD	PERFORMANCE VALUE		
MECHANICAL	GRAB TENSILE STRENGTH	ASTM D-4632	120 lbs (534 N)	205 lbs (912 N)	250 lbs (1112 N)
	GRAB ELONGATION	ASTM D-4632	50%	50%	50%
	CBR PUNCTURE	ASTM D-6241	340 lbs (1512 N)	535 lbs (2380 N)	700 lbs (3114 N)
	TRAPEZOIDAL TEAR	ASTM D-4533	50 lbs (222 N)	80 lbs (356 N)	100 lbs (445 N)
ENDURANCE	UV RESISTANCE AT 500 HRS	ASTM D-4355	70%	70%	70%
	APPARENT OPENING SIZE (AOS)	ASTM D-4751	70 US Std. Sieve (0.212 mm)	80 US Std. Sieve (0.180 mm)	100 US Std. Sieve (0.150 mm)
HYDRAULIC	PERMITTIVITY	ASTM D-4491	1.7 sec	1.4 sec	1.20 sec
	WATER FLOW RATE	ASTM D-4491	140 gpm/ft² (5704 l/min/m²)	100 gpm/ft² (74074 l/min/m²)	80 gpm/ft² (3260 l/min/m²)

PETROMAT® Asphalt Overlay	PERFORMANCE PROPERTY	TEST METHOD	PERFORMANCE VALUE	
	GRAB TENSILE STRENGTH ASTM D-46		101 lbs (449 N)	
MECHANICAL	GRAB ELONGATION	ASTM D-4632	50%	
MECHANICAL	ASPHALT RETENTION	ASTM D-6140	0.20 gal/yd² (0.91 l/m²)	
	MELTING POINT	ASTM D-276	320 °F (160 °C)	
PHYSICAL	MASS/UNIT AREA	ASTM D-5261	4.1 oz/yd² (156 g/m²)	
ENDURANCE	UV RESISTANCE % RETAINED AT 150 HRS	ASTM D-4355	70%	

PETROTAC® Asphalt Overlay	PERFORMANCE PROPERTY	TEST METHOD	PERFORMANCE VALUE	
MECHANICAL	STRIP TENSILE STRENGTH	ASTM D-882 (MODIFIED)	75 lbs/in (13,135 N/m)	
	PUNCTURE RESISTANCE	ASTM E-154	200 lbs (890 N)	
ENDURANCE	PERMEANCE-PERMS	ASTM E-96 METHOD B	0.05 max	
	PLIABILITY - 1/4" MANDREL 180° BLEND AT -25 °F	ASTM D:146 (MODIFIED)	NO CRACKS IN FABRIC OR RUBBERIZED ASPHALT	

REFLECTEX® Unbonded Concrete Interlayer	PERFORMANCE PROPERTY	TEST N ASTM	IETHOD ISO	PERFORMANCE VALUE
	MASS/UNIT AREA	ASTM D-5261		15 oz/yd² (509 kN/m)
	THICKNESS 2 KPA PRESSURE	ASTM D-5199	ISO 9863-1	120 mils (3.0 mm)
PHYSICAL	THICKNESS 20 KPA PRESSURE	ASTM D-5199	ISO 9863-1	100 mils (2.5mm)
	THICKNESS 200 KPA PRESSURE	ASTM D-5199	ISO 9863-1	40 mils (1.0 mm)
	WIDE WIDTH TENSILE	ASTM D-4595	ISO 10319	685 lbs/ft (10 kN/m)
MECHANICAL	WIDE WIDTH TENSILE ELONGATION	ASTM D-4595	ISO 10319	130%
THERMODYNAMIC	TOTAL HEAT/SOLAR REFLECTANCE	ASTM G173-03		80%
HYDRAULIC	WATER PERMEABILITY IN NORMAL DIRECTION 20 KPA PRESSURE	ASTM D-5493	DIN 60500-4	0.004 in/s (1 x 10 ⁴ m/s)
	IN-PLANE WATER PERMEABILITY 20 KPA PRESSURE	ASTM D-6574	ISO 12958	0.02 in/s (5 x 10 ⁴ m/s)
	IN-PLANE WATER PERMEABILITY 200 KPA PRESSURE	ASTM D-6574	ISO 12958	0.008 in/s (2 x 10 ⁴ m/s)
ENDURANCE	WEATHER RESISTANCE	ASTM D-4355	EN 12224	70% Strength Retained
	ALKALI RESISTANCE	-	EN 13249, Annex B	≥ 97% Polypropylene

Minimum average roll values (MARV) are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree confidence that any samples taken from quality assurance testing will exceed the value reported.

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