

Polymer Modified Asphalt/Pavement Reinforcing Fabric CONSTRUCTION SPECIFICATION

"Pavement Reinforcing Fabric," of the Standard Specifications is amended to read:

- PG pavement reinforcing pavement fabric shall be manufactured from polypropylene nonwoven staple fiber needle-punched fabrics. Fabric shall be construction to absorb performance graded polymer modified asphalt cement. The fabric shall be a heat treated on one side and shall conform to the following:

Pavement Reinforcing Fabric Property & Standard Test

Mechanical Properties	Test Method	Unit	Value
Asphalt Retention ¹	ASTM D 6140	l/m ² (gal/yd ²)	1.5 (0.30)
Mass/Unit Area	ASTM D 5261 / D 1776	g/m ² (oz/yd ²)	204 (6.0)
Grab Tensile Strength after Asphalt Saturation ¹ @ 50% elongation	ASTM D 4632	Lbs (kN)	150 (.67)
Elongation at Break, % after Asphalt Saturation ¹	ASTM D 4632	%	50

All property value, shall be based on minimum average roll value (MARV) in the weaker principal direction

(1) Modified for PG Grade Asphalts

A Certificate of Compliance for the fabric used on the project shall be furnished to the engineer. The fabric shall be furnished in protective cover capable protecting the fabric from ultraviolet rays, abrasion, and water. The paving fabric used on this project must meet or exceed the physical properties of Mirafi MPV 700.

Asphaltic Sealant: The asphalt tack coat shall meet the requirements of AASTO MP 1 "Standard Specifications for Performance Graded Asphalt Binder." Elastomers shall be added to the base asphalt cement to achieve the specified performance grade and shall be styrene-butadiene-styrene, tri-block copolymer with out oil extension added

EQUIPMENT:

Fabric Interlayer Installer: The installer of a this polymer modified system must have a minimum of 3years of experience and have installed a minimum of 1 million square yards of paving fabric

Asphalt Distributor: The distributor must be suitably metered, computer rate controlled (CRC) and capable of spraying the asphalt cement uniformly and at the prescribed application rate. No drilling or skipping shall be permitted.

Fabric Handling Equipment: A tractor or similar mechanical device with mounted laydown equipment that is capable of handling full rolls of fabric shall be used. The equipment shall be capable of laying the paving fabric smoothly without excessive wrinkles and/or folds.

Miscellaneous Equipment: The Installer shall provide stiff bristle broom to smooth fabric and a blade to cut the paving fabric. A pneumatic-tire roller may be needed in some cases to smooth paving fabric into the asphalt cement.

INSTALLATION PROCEDURE:

Surface Preparation: The surface for placement of the paving fabric shall be free of dirt, water, vegetation and other foreign materials. Open cracks 3/8 inch or larger shall be filled with sand mixed asphalt as directed by the Engineer. Cracks larger than 1/2 inch or holes shall be filled with cold or hot mix asphalt. The use of a leveling course may be required prior to placing the paving fabric in pavements that are irregular.

Application of Sealant: The asphalt cement and binder must be uniformly spray-applied at the specified rate. The quantity required may vary with the surface condition of the existing pavement (e.g. degree of porosity), but shall be applied at less than a rate of 0.30 gallons per square yard of residual asphalt.

Application of asphalt cement will be performed by truck-mounted distribution equipment, with hand spraying kept to a minimum. The temperature of the asphalt cement must be sufficiently high to permit a uniform spray pattern. PG modified asphalt spread rates are higher than unmodified asphalt therefore the recommended temperature will be increased in the area 325° F- 340° F.

The normal minimum recommended temperature for asphalt cement for fabric placement is 290° F. The heavier fabric will tolerate fabric placement with asphalt cement up to 300° F. It is necessary that the paving fabric be installed at a minimum distance of 50 ft behind the asphalt tack truck unless the tack coat temperature is close to 325° F. In the case of a distributor mounted fabric installation rig the fabric should be at its maximum distance from the fresh oil and at the lowest possible spreading temperature. The paving fabric shall be placed onto the asphalt cement with a minimum of wrinkles before the asphalt can cool or lose its tackiness. The paving fabric shall be placed so that the non-heat treated (bearded or fuzzy) side is placed downward, into the sealant, thus providing optimum bond between fabric and pavement during the construction process. As directed by the Engineer, wrinkles severe enough to cause "folds" shall be slit and laid flat in the direction of paving operations. Brooming the paving fabric will assist it in making intimate contact with the pavement surface.

Any overlap of the paving fabric should be minimized, although an overlap of 1 to 3 inches is recommended to insure full closure of overlapping layers. Care must be exercised to prevent edge pick-up by the paver on transverse joints they may be shingled (overlapped) in the direction of paving operations or secured by asphalt tack. The contractor installing the paving fabric must prove that they have at least 4 years experience in placing paving fabric.

In the event that asphalt cement should bleed through the paving fabric before the hot mix asphalt is placed, it may be necessary to absorb any visible sealant by spreading sand or hot mix asphalt over those areas. This should minimize the tendency for construction equipment tires to lift the paving fabric when driving over it. Turning of paving equipment and other vehicles on the paving fabric must be kept to a minimum to avoid movement or damage to the fabric. Overlay thickness shall be a minimum of 2 inches over fabric.