



## PAVING FABRIC INTERLAYER GUIDE SPECIFICATION

The fabric for the Asphalt-Fabric Interlayer shall be needlepunched, nonwoven, thermally bonded on one side, 100% polypropylene staple fiber fabric, which conforms to the following properties:

<b>Tensile Strength, either direction, (lbs./kn), ASTM D-4632</b>	<b>100 minimum (0.45kn)</b>
<b>Elongation at Break, either direction, (%), ASTM D-4632</b>	<b>50 minimum</b>
<b>Mullen Burst Strength, (PSI), ASTM D3786</b>	<b>200 minimum</b>
<b>Weight (oz/SY), ASTM D-3776</b>	<b>4.1 minimum (140 g/M<sup>2</sup>)</b>
<b>Asphalt Retention by Fabric (GSY/oz/SY)<sup>o</sup> residual min<sup>o</sup> ASTM D-6140</b>	<b>0.20GSY-27.2 oz/SY  (910 g/M<sup>2</sup>)</b>

<sup>o</sup>*Binder requirement increases as weight of fabric increases above 4.1 oz/SY\**

*Note: Weight, grab tensile, elongation and asphalt retention are based on Minimum Average Roll Value [MARV]. Weight to volume conversions based on 235 gal per ton @ 60F = 8.51 pounds or 3861.03 grams per gallon*

The fabric shall have a demonstrated field performance of compatibility with recycling methods and construction survivability.

Prior to placing the fabric, the existing pavement to receive the fabric shall be cleaned to the satisfaction of the Engineer of all materials such as, but not limited to, vegetation, sand, dirt, gravel, and water.

Fabric shall not be placed under overlays of less than **1-1/2”(40mm)** of *compacted* thickness in the **1<sup>st</sup>** lift.

Cracks between 1/4”(6 mm) and 1/2”(13 mm) shall be filled with crack filler as specified by the Engineer. Wider cracks are to be repaired with fine hot mix asphalt. (This is a separate bid item.)

Remove any existing asphalt that deflects under load. Repair by placing a suitable geotextile between the native soil and the new aggregate base prior to paving with the appropriate hot mix asphalt (This is a separate bid item.). Optimum Interlayer System installation includes exposing the new asphalt (leveling course or repairs) to traffic prior to the installation of the fabric interlayer or sealed to prevent absorption of Interlayer tack coat.

Placement of the fabric shall be made only under the following conditions:

1. The ambient air temperature is above 50°F and rising.
2. The pavement is dry and pavement temperature is 40°F and rising.

The fabric shall be placed into the asphaltic binder with a minimum of wrinkles that lap. Large wrinkles (1" and larger) shall be slit and lapped in the direction of paving. Burning or torching of wrinkles will not be allowed. All fabric shall be broomed in order to maximize pavement contact and remove air bubbles. The width of liquid asphalt application will be the fabric width, plus four inches. The fabric shall overlap two to six inches at the longitudinal joints and no more than two inches at the transverse joints. No joints shall be lapped with more than two layers of fabric. Transverse joints shall be shingled in the direction of the paving.

Embedment of the fabric in the asphaltic binder is not recommended until the in-place binder has cooled to 180°F or below as determined by non-contact thermometer. This assists in reducing premature saturation (bleeding). Reducing embedment pressure of the fabric in to the tack reduces premature saturation (bleeding). The equipment for placing the fabric shall be mechanized and capable of handling full rolls of fabric. The equipment used to place the fabric is subject to approval by the Engineer.

Fabric placed over milled surfaces shall be applied as recommended in the procedure as for other overlays with special attention to large cracks and spalled areas. Such areas should be repaired prior to the placement of paving fabric. Pavement fabric shall not be placed in milled areas where the compacted thickness of the overlying asphalt will be less than 1-1/2"(40mm) of **compacted** thickness in the 1<sup>st</sup> lift. Application rate of tack coat shall be increased in milled areas (tapers or full width) by 10-15%. Placement of fabric is recommended from edge of pavement to edge of pavement when proper tack rate and minimum asphalt overlay thickness will be accomplished.

To enhance the bond of the fabric with the existing pavement the Contractor may be required to pneumatically roll the fabric after it is placed. The Engineer will make the determination if this is necessary. (This is recommended if an open-graded friction course or chip seal is to be placed over the fabric.)

Turning of the paving machine or of other vehicles on the fabric should be gradual and shall be kept to a minimum to avoid damage to the fabric. Should equipment tires stick to the fabric during pavement operations, small quantities of paving asphalt concrete shall be broadcast on the fabric to prevent pick-up. **DO NOT decrease** tack rate in order to minimize pick-up on tires.

The contract price per square yard for the Fabric Membrane Interlayer shall include full compensation for furnishing all labor and material. Asphalt tack coat will be a separate contract item.

## **ASPHALT TACK COAT [BINDER]**

The surface area to receive the fabric shall be sprayed with PG grade 64-Y or 70-Y paving grade asphalt binder. Binder shall be applied at approximately 34.0 oz/SY ± 4 oz/SY (1.15 kg/m<sup>2</sup> +/- 0.14 kg/m<sup>2</sup>)[1.15L/m<sup>2</sup>]{0.25 GSY +/- 0.03 GSY} Application rate shall be increased in milled areas (tapers or full width) by 10-15%. [10% for smooth ground areas, 15% for large grooved areas]. The Engineer shall determine the exact rate. Rate to be verified AIA test method, scale tags and/or core samples. The Contractor's attention is directed to Section 92.104, "Applying Asphalt," of the State of California Standard Specifications. Good practice dictates that the asphalt binder be spread in the range of 290°F to 325°F.

Asphalt tack coat spreading truck shall be equipped with a calibrated measuring rod and external truck mounted gauge, which indicates gallons present in tank. **Spot application rate checks will be performed as per the \*AIA Binder Application Rate Testing Procedure\***. Tack rate in gallons is calculated using asphalt cement weight of 235 gallons per ton or 8.51 pounds per gallon (3861.03 gms/gal).

The contract price per ton of asphalt tack coat shall include full compensation for spreading and delivery to jobsite per plans and specifications as directed by the Engineer.

## **Placing Fabric on Variable Width Pavements:**

1. Cul De Sacs – fabric installation shall be straight pulls from the back of the cul de sac and continuing through the connecting street mainline. Fabric shall not be placed on the bubble portion of the cul de sac.
2. Turn Pockets – Fabric should be installed on the turn pockets prior to placing the fabric on the adjacent travel lane. Fabric should be placed on turn pockets that measure six feet in width, or greater.
3. Undulating Curb Lines – Due to paving operation constraints or irregular pavement widths, fabric may be omitted at the curb line if the omitted portion is less than two feet.
4. Intersection Returns (Intersection Radius) – Fabric installation is not recommended at intersection returns (intersection radius) due to the difficulty involved in product placement. If the agency/owner desires fabric placement in these areas, it is recommended the manufacturer be contacted for placement recommendations.

For additional information, contact **AIA**

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