

Special Specification 3032

Reinforced Paving Mat for Asphalt Pavement Overlays



1. DESCRIPTION

Furnish and place a high strength paving mat within the pavement structure as a moisture barrier and stress relieving interlayer. The HS Paving mat must have an elastomeric polymer coating; bitumen coatings are not eligible for consideration.

- 1.1. **Quality Control.** Before installing the paving mat, arrange a meeting at the site with the manufacturer's representative and, where applicable, the paving mat installer. Notify the Engineer at least 3 days in advance of the time of the meeting.

A manufacturer's representative must be present, at minimum, for the first day of installation of the engineered paving mat and available thereafter upon request by the Engineer.

2. MATERIALS

- 2.1. **Paving Mat.** Provide paving mat meeting the requirements in Table 1. Provide a copy of the manufacturer's specifications to the Engineer at the pre-construction meeting or no later than five working days prior to installation. Material must be certified manufactured in the USA.

Table 1
Paving Mat Properties

Property	Test Method	Min	Max
Asphalt Retention, L/m ²	D 6140	0.46	-
Fabric Weight, g/m ²	D 5261	237	-
Tensile strength, MD & CMD, kN/m	D 5035	50	-
Strain at Maximum Load, %	D 5035	-	5
Puncture Strength, N	D 6241	1780	-
Melting point, °C	D 276	232	-
Permeability cm/sec	D5084		3.2x10 ⁻¹¹
Recyclability without Screening %	AASHTO T283-07	>95% of control	
Reinforcement Fiberglass Strand Spacing	in.		<.25

- 2.1.1. **Storage and Handling.** Store the paving mat in accordance with the manufacturer's recommendations in a dry covered condition free from dust, dirt, and moisture.

- 2.2. **Tack Coat.** Furnish AC-20-5TR that meets the requirements of Item 300, "Asphalts, Oils, and Emulsions." The Engineer will obtain at least one sample of the tack coat binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with the specification. The Engineer will obtain the sample from the asphalt distributor immediately before use. The rate will be shown on the plans and paid for separately.

3. CONSTRUCTION

- 3.1. **Surface Preparation.** Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing any material. Remove vegetation from pavement edges. Mill rutted and low spots in the pavement or place a leveling course as shown on the plans.

Do not place asphalt binder or the paving mat when weather conditions, in the judgment of the Engineer, are not suitable. Air and pavement temperatures must be sufficient to allow the tack coat to hold the paving mat in place. The air temperature must be 50°F and rising for placement of the asphalt tack coat.

- 3.2. **Tack Coat.** Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply a thin, uniform tack coat to all contact surfaces of curbs, structures, and all joints. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Roll the tack coat with a pneumatic-tire roller to remove streaks and other irregular patterns when directed. Apply tack coat to an area 4 in. wider than the paving mat, and wide enough to cover any overlaps. Do not allow traffic on the tack coat.

- 3.3. **Paving Mat Placement.** Place the paving mat promptly onto the tack coat with minimum folds or wrinkles. As directed by the Engineer, wrinkles or folds in excess of 1 in. must be slit and laid flat or pulled out and replaced. Apply additional tack coat as needed to repaired areas, or to any other areas as directed by the Engineer, to achieve adequate bond to the substrate. Remove and replace damaged paving mat with cuts, tears, or any other apparent damage, in accordance with the manufacturer's recommendations, at the contractor's expense with the same type of material.

Pneumatic tire rolling must be used to remove air bubbles and to maximize paving mat contact with the pavement surface; in accordance with the manufacturer's specifications and to the satisfaction of the Engineer. Longitudinal overlaps require 1-2 in. minimum. Transverse overlaps require 2-4 in. minimum.

Broadcast clean sand or loose asphalt concrete mix to cover any excess tack coat that bleeds through the paving mat under normal construction traffic. Remove any excess sand from the interlayer prior to placing the HMA overlay.

Do not allow traffic, except necessary construction traffic or emergency vehicles, on the paving mat, unless approved by the Engineer. If traffic on the interlayer is approved by the Engineer, lightly broadcast clean sand over the paving mat interlayer. Remove any loose sand prior to paving.

Closely follow placement of the paving mat with the first lift of the HMA overlay. Place overlays on the same day, unless otherwise approved by the Engineer. In the event of rainfall on the paving mat prior to the placement of the first lift of HMA overlay, allow the paving mat to dry before the HMA is placed. Do not place mix at temperatures higher than the melting point of the paving mat.

4. MEASUREMENT

- 4.1. **Tack Coat.** Tack coat material will be measured in gallons at the applied temperature by strapping the distributor tank before and after road application.
- 4.2. **Paving Mat.** The paving mat will be measured by the square yard of roadway on which it is placed.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit prices bid for "Paving Mat," and "Tack Coat" of the type and grade specified. This price is full compensation for cleaning the existing pavement, furnishing, preparing, hauling and placing all materials; for all manipulation, including rolling, and for all labor, tools, equipment and incidentals necessary to complete the work.