With Road Fabrics
Asphalt Overlay Fabric

Without fabric

Road Fabrics, Inc.

Asphalt Overlay System

Road Fabrics, Inc.
Road Fabrics Asphalt Overlay System is far superior in performance to thicker ACC sections. Comparative test sections have been monitored since 1979 for reflective cracking, waterproofing and fatigue life. It has been observed that, regarding reflective cracking, the Road Fabrics Asphalt Overlay System is equivalent to a minimum 1.2 inches of additional ACC. As a waterproofing layer, the Asphalt Overlay System is more durable and effective. When included in an overlay, the Road Fabrics System can prolong the overlay fatigue life anywhere from 50% to 200%. It should be noted that, in some cases, additional ACC thickness is required to overcome structural deficiencies. But in a strict cost comparison, Road Fabrics Overlay System is less than half the cost of an additional 1.2 inches of ACC.

Additional Features
Under certain conditions, the Road Fabrics Asphalt Overlay System can improve the fatigue life of the road ten times over non-reinforced pavement. It is resistant to punctures and tears during road construction, and forms a long-lasting waterproof barrier by combining with paving grade asphalt. Road Fabrics Asphalt Overlay Fabric is resistant to various chemicals and is rot-free.

Equipment

Asphalt Distribution
The distributor should have a positive shut-off valve and hand spray with a single nozzle. It needs to be metered and able to apply the asphalt sealant uniformly at a prescribed rate. The project engineer should require that the equipment be tested off-site prior to the application to confirm proper set-up and performance. Photo A.

Fabric Laydown Equipment
Laydown of the fabric can be accomplished manually or by means of mechanical equipment. If mechanical laydown equipment is used, it should have the capacity to dispense a full roll of fabric. The equipment must lay the fabric smoothly without causing folds or wrinkles.

Construction Procedure

Surface Preparation
The surface should be clean, dry and free of vegetation. Filler, suitable to the surface, should be used to fill small cracks between ¼ inch or larger. Use a hot mix, slurry or other suitable filler to repair larger holes or cracks. It should be noted that the fabric should not be applied until the fillers cure, if they contain volatile chemicals.

Deteriorated or rough pavement may require a leveling course prior to the application of the Asphalt Overlay Fabric.

Application of Sealant
Using distributor equipment, spray apply the asphaltic sealant uniformly at the specified rate. Hand spraying, if required, should be kept to a minimum. Asphalt temperature is critical to ensure a uniform spray pattern. Minimum temperature for asphalt cements is 290°F, while heavier grade emulsions may be as high as 160°F. If the fabric itself is to be sprayed, do not exceed 325°F or damage to the fabric may occur. Photo B.

Asphalt sealant should be applied 2 to 6 inches wider than the width of the fabric. Fabric movement is possible in areas of excess asphalt, so any drools or spills should be cleaned from the road surface.

Fabric Placement
Before the asphalt has cooled and tackiness is lost, the fabric should be placed into the asphaltic sealant while making sure wrinkles are kept to a minimum. If any severe wrinkles or folds do occur, they should be slit and laid down flat. To maximize fabric contact with the pavement surface, brooming or pneumatic rolling is preferred. Rolling will flatten most small wrinkles and prevent them from effecting performance.

Fabric joints should overlap 1 to 3 inches to assure full closure. Photo C.
TruPave® Engineered Paving Mat

TruPave engineered paving mat is a non-woven fiber glass/polyester hybrid mat designed specifically to withstand the higher Superpave Mix Design temperatures. It offers the high strength of fiberglass at a low strain to further reduce reflective cracking.

Special Considerations

Emulsion Cure Time
Before the fabric is installed, it is important, when using asphalt emulsions that they be fully cured. Essentially there should be no moisture remaining. Emulsion type, temperature, humidity and other variables can vary the cure time.

When closely examined, the characteristic brown hue of the uncured material will turn to a glossy black and will be tacky.

Asphalt Sealant Quantity
Porosity of the surface to be covered and the quantity of residual asphalt in the sealant material specified, should govern the asphalt application rate. Depending on pavement condition, application rate may vary from 0.20 to 0.30 gallons per square yard. When using asphalt emulsions, an amount which results in a cured 0.25 gsy of residual asphalt should be used. The fabric alone will absorb at least 0.20 gsy residual asphalt, under heat of the applied overlay. Reduce the application rate by approximately 20% on steep grades, street intersections and areas where vehicle speed change is common.

Care should be taken in determining the quantity of asphalt which is under the fabric. The membrane must be fully sealed but excessive amounts of asphalt can cause a slippage plane. Asphalt sealants should be compatible with the asphalt used in the hot mix.

Skid Resistance
Reduce skid resistance should be a consideration if traffic is allowed on the newly installed Road Fabrics Asphalt Overlay Fabric. Signs and/or flagmen should warn motorists that reduced speed is required and the surface may be slippery when wet. Appropriate signs stating the safe speed limit should be posted in all areas. Other conditions that could further reduce skid resistance are: improper installation, improper tack coat, rainfall or other moisture.

Tack Coat
Certain conditions may necessitate the use of a tack coat of the fabric prior to placement. These conditions include sanding, traffic, insufficient sealant applied, dust accumulation on the surface or a delay in applying the overlay.

Limitations
Portland cement concrete slabs may have to be stabilized before application of the fabric if vertical deflection at the joints has occurred. Otherwise there is risk that reflection of the old cracks may reoccur. In severe climates, thermal cracking may still appear due to expansion and contraction of the overlay itself. Secondary and advanced stages of cracking occur as a result of water infiltration. This type of cracking will be minimized due to the waterproofing properties of the membrane. This makes overlay fabrics valuable even in non-ideal conditions.

Recyclable
There are no problems in drum-dryer recycling, cold milling or subsequent paving operations when pavement containing Road Fabrics Asphalt Overlay Fabric is recycled.
commercial, urban, residential

Your geotextile specialist

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You can rely on Road Fabrics, Inc. to be your geotextile specialist, providing you with excellent customer service.

We offer a complete array of quality products and are an approved dealer for multiple manufacturers. Road Fabrics, Inc. brings extensive product knowledge to every project, backed by a comprehensive track record which spans over thirty years. Completed work, which includes federal highways, thousands of urban and rural streets, parking areas, bridge decks and airport runways. We have established world-wide acceptance of our products through our attention to details and superior service. Please call us for in-depth product information and pricing.

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