



# Installation Guideline: Asphalt Overlay Fabric

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## INSTALLATION INSTRUCTIONS

### General

This document contains information consistent with generally accepted practices of identifying, handling, storing and installing geosynthetic material. Failure to follow these guidelines may result in the unnecessary failure of the geosynthetic in a properly designed application. The geotextile fabric will be rolled on cores having strength sufficient to avoid collapse or other damage from normal use. Each individual roll shall be wrapped with a plastic covering to protect the fabric from damage during shipping and handling, and shall be identified with a durable label clearly visible on the outside of the wrapping of the roll. While unloading or transferring the geosynthetic from one location to another, prevent damage to the wrapping, core, label, or to the geotextile fabric itself. If the geotextile fabric is to be stored for an extended period of time, the geotextile fabric shall be located and placed in a manner that ensures the integrity of the wrapping, core, and label as well as the physical properties of geotextile fabric. This can be accomplished by elevating the geosynthetic off the ground and ensuring that it is adequately covered and protected from ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, fire or flames including welding sparks, temperatures in excess of 60°C (140°F), and human or animal destruction.

### Equipment

Geotextile Fabric Handling Equipment: Mechanical or manual laydown equipment shall be capable of laying the geotextile fabric smoothly. For large distances, geotextile fabric can be installed with a mechanical unit that is mounted on the front bucket of a tractor or backhoe. Miscellaneous Equipment: Stiff bristle brooms or squeegees to smooth the geotextile fabric, scissors or blades to cut the geotextile fabric, and brushes for applying asphalt sealant at geotextile fabric overlays (as required) shall be provided.

### Surface Preparation

Prepare the surface on which the geotextile fabric is to be placed so that no damage to the geotextile fabric will occur. Thoroughly clean the old pavement including removing all dirt, water, oil and foreign materials. Fill all cracks with an asphaltic cement slurry. Fill very large cracks ( $\frac{1}{8}$ " -  $\frac{1}{4}$ " or larger) and potholes with a full depth hot mix. Uncut asphalt cement is the preferred sealant to impregnate and seal the geotextile fabric, as well as bond it to both the base pavement and overlay. Uncut asphalt cement is preferred because it develops adhesive strength quicker. Cut-back grade asphalt or emulsions which contain solvents are not recommended as tack coat for the installation of the geotextile fabric. The rate of tack coat will depend on the porosity of the existing pavement. Apply the tack coat at a distribution range of 0.9 l/m<sup>2</sup> (0.20 gal/sy) to 1.4 l/m<sup>2</sup> (0.30 gal/sy). Use a calibrated distributor truck to assure the specified tack rate. Apply tack coat at or above the recommended application temperatures of 140°C (290°F) for asphalt cement and 70°C (160°F) for heavier grade emulsions. Apply coat at least 15 cm (6 in) wider than geotextile fabric. If emulsions are used, allow any water to evaporate before applying the geotextile fabric. The tack coat temperature should not exceed 160°C (325°F). Air and pavement temperatures during installation should be at least 10°C (50°F) and rising for asphalt cement tack coat or 15°C (60°F) and rising for asphalt emulsion.

### Geosynthetic Placement

Place the geotextile fabric with the rougher side against the existing pavement while tack coat is still tacky. Place the geotextile fabric carefully to insure that it is straight. For sharp corners or curves, cut the geosynthetic to size and place by hand. If any wrinkles longer than 3 cm (1 in) do occur, slice the geotextile fabric and lap the ends in the direction of paving operation. Any time that a transverse joint is needed, overlap the geotextile fabric 10 cm (4 in) to 15 cm (6 in) in the direction of paving operation. Overlap longitudinal joints 5 cm (2 in) to 10 cm (4 in). Apply extra tack coat to any joints to insure proper bonding. After the overlay geotextile fabric is placed, follow with standard paving operation.

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