1100 HIGHWAY MEMBRANE

PRODUCT INFORMATION AND INSTALLATION INSTRUCTIONS

GENERAL:

POLYGUARD 1100 HIGHWAY MEMBRANE is a hot applied system adhered to the pavement with an AC tack coat. It has a top layer of high strength fabric, with a thick middle layer of flexible mastic to provide stress relief, and a bottom layer of high strength fabric.

POLYGUARD 1100, applied to cracks or joints on an old pavement prior to installation of a new asphalt overlay, reduces the occurrence and severity of reflective cracking in the new overlay. In addition, the membrane will act as an "umbrella" over the old crack or joint, reducing the amount of rain or runoff moisture which penetrates the old pavement surface and reaches the pavement base.

Asphaltic Tack Coat:
Asphalt tack must be applied to the pavement surface prior to fabric installation. The tack shall meet the following requirements:

MATERIAL	GRADE	SPECIFICATION
Asphalt Cement	AC-20*	AASHTO M226
* Use AC10 asphalt if cold application condition exists.		

Application of Tack Coat:
Tack coat should be sprayed at 0.10 Gal./Sq. Yd. (approx.). A typical fog coat will suffice in warm weather. In colder conditions, a heavier spray may be required. In no case should tack exceed 0.20 Gal./Sq. Yd. This could cause a slippage of the mat when the heat of the hot mix re-liquifies the binding agent. Whether tack is being applied by mechanical means or from a pour pot, the edges of the mat are the most important part. Edges should be bonded well to the old pavement. Minimum recommended temperature for the AC-20 tack application is 290 F.

The asphalt tack should be applied 3" wider than the material width. Tack shall e applied no further in advance of material placement than can be accomplished without losing adhesion of the tack.

In certain applications a high solids emulsion such as RS-2 may be used as a tack. Emulsion must break prior to application of the membrane.

Other:
Small amounts of washed sand may optionally be used to blot excess asphalt if necessary to facilitate movement of traffic or construction equipment over the material prior to the overlay. Hot mix can be disbursed on membrane ahead of paver if membrane is sticking to tires, trucks, or paver.

EQUIPMENT NEEDED:

1. Distributor or motorized tar kettle, equipped with hand held wand is recommended. Where not practical, a pour pot may be used to secure the material to pavement.

2. Miscellaneous Equipment

a) Razor knives may be used to cut the mat.
b) A hand roller is requires during cold weather applications.

CONSTRUCTION:

Surface Preparation:
The surface upon which the material is to be placed should be free of dirt, water, and vegetation. Cracks over 1" or holes are to be filled with a cold mix or a hot mix.

Material Placement:
The material shall be placed into the tack prior to the time the asphalt has cooled and lost its tackiness. Woven mesh surface should be placed up (exposed to traffic).

Where transverse and longitudinal joints meet, membrane must be butted or overlapped. Overlap is mandatory on bridge decks. Additional tack is required to bond the two mat areas together where overlapping is used.

Repair:
Repairs can be accomplished by cutting loose membrane with a razor knife and tacking new repair material.

Removal and replacement of material that is damaged after placement is the responsibility of the contractor.

Hot Mix Overlay:
Hot mix overlay can immediately follow placement of membrane. A 3" minimum overlay thickness is recommended, with multiple lifts. Asphalt tack coat is required prior to overlay.

General:
Air/pavement temperatures during installation should allow adequate tack. Material installed in cold weather should be overlaid quickly.