



## Mirafi® MTK Membrane Installation Guidelines Joint and Crack Repair

Mirafi® MTK is a unique, very cost effective waterproofing and stress relief membrane comprised of self-adhering rubberized asphalt and durable polypropylene non-woven fabric. A release paper, which is removed prior to placement, covers the self-adhesive mastic and provides for easy installation. Mirafi® MTK prevents surface moisture intrusion and delays reflective cracking

### Applications

- Longitudinal and transverse joints
- Alligator cracks
- Local distress areas
- Pot holes

### Equipment

No special equipment is required for installing Mirafi® MTK. Utility knives are all that are used to cut the membrane and release sheet. A pole or rope can be used to assist in un-rolling and a stiff broom or pneumatic roller can be used to improve adhesion to the existing pavement.

### Surface Preparation

Existing pavement surface must be reasonably clean and dry. Cracks wider than 3/8-inch should be filled with suitable crack filler. Severally spalled or other distressed areas must be repaired according with accepted paving practices. Portland cement concrete pavement slabs should be stable. Excessively subsided joints should be raised to proper grade by applying a thin leveling course. If leveling course is used crack sealing is not necessary. Note: Some commercial crack filler expand under the heat of an overlay. Therefore the crack should be filled level with the existing pavement surface.

**Primer:** No primer is required when pavement surface is 65 degree F or above. Use of primer is recommended if temperature is below 65 degree F, and the membrane may be exposed to traffic prior to overlay. Any suitable priming material composed of refined asphalt and rapid drying solvent may be used. Primer material is also available from the attached listing. If primer is required then brushes or rollers will be needed to apply the primer to the surface primer may be sprayed or large area usage

**Temperature:** The surface temperature should be 45 degree F and above when installing Mirafi® MTK. Storage temperature should not exceed 125 degree F.

**Slope Considerations:** Asphalt pavements are more prone to shoving and shearing on steep grades especially in areas of stopping or sharp turning. Mirafi® MTK can be installed on grades with slopes up to 10% on normal pavement conditions. If there are concerns of existing pavement surface, overlay thickness, asphalt mix traffic volumes or construction procedures please contact Mirafi® MTK. If construction allows begin placing membranes at the lower end of slope and work up.

## **Installation**

Center the roll over the joint or crack to be treated, release paper still attached. Allow for a material overrun of 2-3 inches beyond the end to ensure waterproofing at this point. Cut the membrane with utility knife. Install the Mirafi® MTK by removing release paper.

In the case of Portland cement concrete, transverse joint strips shall be applied before longitudinal joint strips to minimize the chance of the membrane peeling. On longitudinal joints allow 2-3 inches overlap in the direction of traffic. Material should be laid smooth and adhere well to the existing pavement. Rolling the membrane with a pick up truck or pneumatic roller will assist in proper adhesion. A stiff broom can also be used to obtain adhesion

Note: On transverse joints where one lane is open to traffic, pre-cut each strip to required length and re-roll. Remove 6 to 12 inches of release paper from the mastic and apply this to moving traffic side end of the joint. Pull the remaining paper and install membrane on the joint.

## **Trafficking**

Limited traffic will not damage Mirafi® MTK membrane and can be opened to construction traffic. However if local conditions require that traffic should be permitted and in the judgment of the engineer that safety is not issue the fabric can be opened to traffic. Signs should warn motorists that the driving surface might be slippery when wet and speed should be significantly reduced.

## **Application of Overlay**

**Tack coat:** A standard pre-paving tack coat is applied over the Mirafi® MTK and rest of the surface before placing the hot mix asphalt layer.

**Overlay Thickness:** A minimum compacted thickness of 1-1/2 inches is recommended.

## **Repair of localized distressed Areas**

Mirafi® MTK can be used as a preventive maintenance tool on local distress areas, alligator-cracked areas and potholes in parking lots, streets, highways, and on any other paved area. Properly installed membrane can be left open to traffic.

**Preparation:** Pavement surface to be treated should be clean and dry. Localized areas of base failure, and alligator cracking may in some cases require installation of a leveling course prior to installation. This is an engineering judgment. Potholes should be repaired using procedures recommended by Asphalt Institute. A leveling course may also be required where grooves in a milled pavement have vertical surfaces, however Mirafi® MTK can be installed over a finish milled surface.

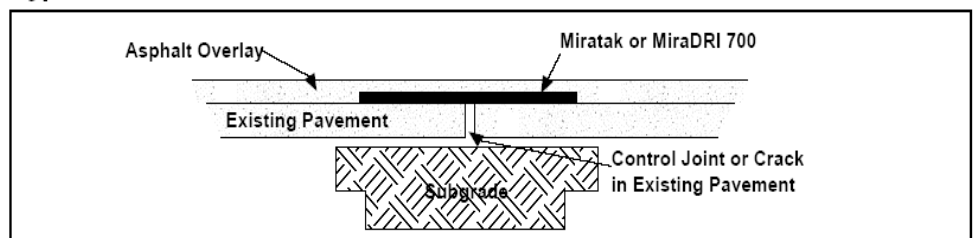
**Mirafi® MTK Placement:** Position the roll, with release paper attached over the distressed area. Allow at least 4-6 inches additional material for overlapping sound pavement adjoining the patch.

Unroll membrane by removing the release paper.

Allow 2-3 inches overlap if adjacent panels are required to cover the distressed area.

Roll the membrane with a

## **Typical Cross Section**



pick up truck tires for good adhesion to the existing surface.

Mirafi<sup>®</sup> MTK can be slippery when wet. If local conditions require traffic on the membrane, safety precautions must be taken to limit the possibility of a skidding hazard. These include, but are not limited to, speed reductions and warning signs to alert driver that the surface may be slippery when wet

Note: For cold weather patching, the surface area to be patched may be heated with a torch to insure adequate adhesion. The mastic side of the Mirafi<sup>®</sup> MTK may be lightly warmed also.

#### **Paving Operations**

Place a standard paving tack coat over the membrane and pavement. The use of a cutback is not recommended. The top surface of the Mirafi<sup>®</sup> MTK is pre-coated with asphalt cement tack coat so that no extra tack coat, other than the standard paving tack coat is needed on the top of Mirafi<sup>®</sup> MTK. Paving operation follow the placement of tack coat. The overlay should be designed based on the standard designed procedures.

In cases where a fine or dense graded mix is used shoving or humping of very hot or soft asphalt mat may occur. This can occur during compaction at the juncture of the smooth Mirafi<sup>®</sup> MTK and rough original pavement surface. This may occur in rare cases when vibratory rollers are aggressively used. This is generally resolved by slowing the roller to reduce the shear forces and using a static roller on the secondary passes. It may be appropriate to wait for the hot mix to cool at the lower levels of acceptable compaction temperatures.

#### **Storage and Handling**

Mirafi<sup>®</sup> MTK is packaged in boxes that provide protection from ultra-violet light during storage. However it is recommended that the product be stored in a cool, dry place away from direct sunlight. Storing membrane in the sun on a hot day may make the membrane sticky and hard to work with. On cooler days one may want to keep membrane in the sun to enhance tackiness. Long-term storage should be indoors at temperatures <125 F degrees.

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