

INSTALLATION GUIDELINES FOR TENCATE MIRAFI MPG COMPOSITE PAVING GRIDS

Prepared by:

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Surface Preparation

- Power broom, sweep or vacuum the pavement before installing MPG Composite Paving Grid(s). The pavement surface should be dry, free of dirt, oil and loose stones prior to installation. Additional effort may be necessary on a milled surface to clean the milled surface of dirt and debris.
- Fill all cracks ¼" (0.63 cm) or greater with an approved material.
- If the existing pavement surface exhibits extensive faulting at joints or cracks, a thin leveling course should be placed prior to placing the fabric. If a leveling course is used, crack sealing may not be necessary
- Repair all failed pavement areas prior to installing the MPG Composite Paving Grid.
- Surface must be dry prior to the composite grid placement. (Delamination between the composite grid and existing pavement surface may occur if installed over wet or damp surfaces).
- MPG Composite Paving Grids must be clean and dry prior to the asphalt overlay application, otherwise delamination may result between the composite grid and new overlay due to wet, or dirty conditions.

Asphalt Tack Installation

- **Always** use neat PG asphalt or polymerized asphalt tack. Emulsions or cutbacks are not recommended.
- Tack temperature in the truck should be between 325 - 400°F (163 - 204°C).
- PG64-XX, PG70-XX, PG76-XX asphalts should be used. For high temperature installations, higher viscosity asphalt tack should be used. These include, but are not limited to; PG70-XX asphalts. (See Asphalt Binder Table 1 for recommended grades to be used when installing *MPG Composite Paving Grids*)
- Tack coat application rates are based on the specific *MPG Composite Paving Grids* used. Table 2 provides the recommended optimum rate of tack to be used based on material type and surface conditions. Adjusting the tack rate may be made based on existing surface conditions.
- The width of the asphalt tack shall be sprayed sufficiently to include the mat width, plus a minimum of 4" (10.16cm) longitudinally and transversely on the overlap side(s).

MPG Composite Paving Grid Installation

- *MPG Composite Paving Grids* must be installed with glass fibers placed into the asphalt tack coat.
- Any wrinkle that occurs during installation, 1" (2.54cm) and larger, shall be slit and lapped in the direction of paving and pressed down into the tack coat. Every effort should be made to pull wrinkles out by hand in lieu of cutting the continuous fiberglass filaments.
- To ease installations around curves, and avoid the increased possibility of wrinkles, it may be necessary to place shortened lengths by mechanical equipment or by hand.
- To alleviate the pickup of MPG Composite Paving Grids by vehicle tires, caused by the exposure to high ambient temperatures or overspray of tack causing bleed-through, clean blotting sand or hot mix asphalt may be required to be spread over the affected area. Excess blotting sand shall be removed before the installation of the final hot mix asphalt placement over the *MPG Composite Paving Grid*.

- Regular traffic should not be allowed to travel on the installed MPG Composite Paving Grid.
- *MPG Composite Paving Grid* can be installed using a tractor, truck-mounted frame or by hand. Brooms should be used to seat the *MPG Composite Paving Grid* into the tack and remove air bubbles to ensure complete contact.
- Rolling equipment may be used to "seat" the *MPG Composite Paving Grid* in cooler weather where tack coat tends to harden and stiffen and winds tend cause a skin to form on the tack coat surface, reducing the adherence to the *MPG Composite Paving Grid*, and it is more likely to be displaced by the wind.
- Typical material overlaps may range from a minimum of 1" to no more than 4". It is recommended that transverse overlaps run in the direction of the paving operation to avoid material from folding over under the paver. All overlaps must be tacked together, so untacked material should either be tacked, or removed, as long as there is still and overlap
- Turning by paving equipment, asphalt delivery trucks or other construction vehicles on the *MPG Composite Paving Grid* should be gradual, and shall be kept to a minimum to avoid damage to the material.

Asphalt Paving on the Installed MPG Composite Paving Grid

- *MPG Composite Paving Grid* should be protected from getting wet after installation. This can be accomplished by following the weather reports closely, and if rain is imminent, then the amount of exposed installed *MPG Composite Paving Grid* should be significantly reduced. It is also recommended that the installed fabric be rolled by a pneumatic tire roller to maximize saturation of the *MPG Composite Paving Grid* prior to the rainfall.
 - The recommended minimum hot mix asphalt overlay thickness for *MPG Composite Paving Grids* is 1.5".
- Care must be taken when handling *MPG Composite Paving Grids*. Do not drop or bend rolls as this may damage the core and material.
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- During construction, do not allow asphalt delivery vehicles to park on *MPG* the installed *Composite Paving Grid* for extended periods of time. This could cause damage to the fabric and cause bleed through of the tack caused by tire and motor temperatures of asphalt trucks and support equipment.
- To cut rolls of material, an articulating blade should be used. A circular saw is not recommended.

Table 1: Recommended Asphalt Binders for Mirafi® MPG Composite Paving Grids

	Penetration Grade			AC Grades	PG Grades	Polymer Modified
	40			AC 40		
Asphalts for Mirafi® MPG	50				PG 70- 22	SBS PG 76-22
		60		AC 20	PG 67- 22	SBS PG 70-22
					PG 64-22	
		70	85	AC10	PG 58-10	
			100		PG 58-28	
			120	AC 5		HPSPG76-10
		150			PG 52-28	
			200	AC 2.5		
			300			

Table 1 is prepared for use as a guide for liquid asphalt binders to be used as tack coats when installing Mirafi® MPG Composite Paving Grids. It is not intended to be an exact comparison of liquid asphalt rate or specific properties of individual grades for use in specific applications. The region of the country and ambient temperatures at the project can influence asphalt binder preference and selection.

The amount (gallons/Square Yard) of tack asphalt placed should be sufficient to:

- 1) Bond the fabric to the old pavement (or leveling course).
- 2) Saturate the fabric.
- 3) Provide enough residual to bond the new overlay to the fabric.

Too light of an application of tack coat could preclude any of the above. Too heavy a tack coat could result in slippage problems at higher temperatures. Therefore, it is of the utmost importance that the proper amount of tack coat be applied. The condition of the existing pavement is one of the determining factors for the proper application rate.

Table 2: Recommended Asphalt Application Rates

Mirafi® MPG Composite Paving Grids	MPG 100	MPG-G ⁴
Typical Application Rate		
Gallons/Square Yard	0.32	0.19
Liters/Square Meters	1.2	0.86
Heavy Application Rate		
Gallons/Square Yard	0.35	0.21
Liters/Square Meters	1.3	0.95

Application rates should be adjusted based on pavement conditions, (milled, irregular or porous, oxidized and cracked-distressed are characterized as heavy applications).

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