



ENGINEERED TO PERFORM.

Reinforcement solutions that extend
pavement life and maximize value.

ROADGLAS® MAT

ROADGLAS® GRID



High-Performance Fiberglass Reinforcement For Asphalt Overlays

Glass reinforcement in asphalt overlays is transforming pavement preservation strategies for owners, municipalities, and DOTs. By acting as a high-strength structural barrier and stress distributor, ROADGLAS® defers major deterioration and prevents reflective cracks from reaching the surface, delivering substantial long-term asset value.

TOP 10 BENEFITS OF ROADGLAS®

BENEFIT AREA	HOW IT WORKS & KEY ADVANTAGES
Extends Pavement Life	Defers major deterioration for years compared to standard unreinforced overlays, significantly protecting the initial asset investment.
Reduces Cracking	Acts as a robust barrier against reflective cracks reappearing from old pavement below. ▪ Fewer ongoing surface repairs and less regular crack sealing required ▪ Drastically reduces customer and commuter complaints
Lowers Lifecycle Costs	Higher initial installation cost is heavily offset by reduced total ownership costs over the lifecycle. ▪ Significantly extends maintenance intervals and service life ▪ Postpones expensive full-depth reconstruction requirements
Delays Reconstruction	Full-depth pavement reconstruction is highly expensive, labor-intensive, and disruptive. Reinforced overlays extend existing structures' useful life to postpone reconstruction for years.
Heavy Traffic Performance	High tensile strength fiberglass creates a fortified layer to reliably resist fatigue cracking, severe rutting, shoving, and traffic-induced mechanical stress. Ideal for heavy truck routes.
Reduces Disruptions	Fewer cracks and minimal physical pavement repairs translate directly to reduced operational headaches. ▪ Fewer lane closures, traffic bottlenecks, and business/transit downtime ▪ Lower overall maintenance labor costs and public inconvenience
Maximizes ROI	Achieves far more years of service from the exact same overlay investment, maximizing the true engineering value and efficiency of each paving cycle.



Sustainable Preservation

Strengthens existing structures from within rather than completely removing and rebuilding them. Lowers material/aggregate consumption and construction hauling/waste and delivers significantly faster project completion times.

Proven Technology

Successfully deployed for decades across demanding civil applications giving highway engineers and specifiers absolute confidence in long-term performance.

Contractor Advantage

Offers clear market differentiation, enabling contractors to confidently bid longer warranties.

- Improves reputation while drastically reducing costly callbacks from premature cracking.
- Differentiates project offerings from low-bid competitors.

STRATEGIC APPLICATIONS & SECTORS

Where the Investment Makes Sense

- The existing pavement base remains structurally sound.
- Reflective cracking is identified as the primary mode of distress.
- In high-volume areas where traffic loads are exceptionally high.
- Owners want to maximize overlay life while strictly avoiding full reconstruction costs.

Proven Application Sectors

- Interstate Highways & High-Volume Corridors
- Heavy Trucking Routes & Freight Terminals
- Airports, Taxiways, and Runways
- Municipal Roads & Urban Transit Ways
- Commercial Parking Lots & Retail Centers
- Industrial & Logistics Facilities





History & Proven Performance of Glass Reinforcement in Asphalt Overlayers

EXECUTIVE OVERVIEW

Glass reinforcement in asphalt overlays has established a formidable track record, having been utilized commercially since the late 1960s and early 1970s. Broader industry adoption rapidly expanded during the 1980s and 1990s as global pavement preservation frameworks became significantly more cost-focused and lifespan-oriented. Today, glass fiber infrastructure reinforcement stands as a mature, technologically advanced intervention strategy backing roughly 50 to 60 years of proven field performance.

HISTORICAL TIMELINE & EVOLUTION

ERA / PERIOD

FOCUS & KEY INFRASTRUCTURE DEVELOPMENTS

1960s – 1970s

Early Development

- Fiberglass materials first adapted from aerospace and heavy industrial structural composites into specialized roadway engineering applications.
- Initial experimental systems focused heavily on stress-relief membranes and targeted micro-cracks directly over rigid concrete pavements.
- First documented field deployments of flexible fiberglass fabrics and structured mats in thin pavement overlay test tracks.

1980s

Wider DOT Testing

- State Departments of Transportation (DOTs) and international road research organizations initiated comprehensive field evaluations of structural fiberglass grids and paving fabrics.
- Empirical testing targeted multi-faceted outcomes: reflective crack mitigation, overall asphalt overlay life extension, and critical structural waterproofing.
- While many initial early installations were categorized as experimental, they continuously yielded outstanding, highly promising field data.

1990s

Mainstream Tool

- Fiberglass grid designs achieved standardization across industry regulatory bodies.
- Leading manufacturers formulated highly specialized, engineered interlayers purpose-built specifically for demanding asphalt overlay environments.
- Transportation authorities globally integrated fiberglass reinforcement choices directly into master specifications for commercial airports and high-volume interstate highways.



2000s- Present

Advanced Composites

- The discipline evolved into modern multi-material matrix solutions far superior to early experimental variants.
- Widespread utilization of complex fiberglass + polymer composites, engineered self-adhesive grids, moisture barrier interlayers, and high-modulus reinforcement products.

MATERIAL TRANSFORMATION: THEN vs. NOW

While the fundamental engineering objectives have remained constant over the decades—specifically to slow reflective cracking, reinforce asphalt overlays, and safely extend operating lifecycles without requiring immediate full-depth reconstruction—the core chemical and physical technologies have undergone a significant transformation.

Characteristics of Modern Engineered Systems:

- **Ultra-High Tensile Strength:** Advanced fiberglass formulation engineered to withstand extreme structural stresses.
- **Polymer Matrix Coatings:** Superior dynamic cross-linking coatings that protect glass fibers during harsh milling and compaction processes.
- **Pressure-Sensitive Adhesive Backing:** Factory-applied adhesive guarantees secure, fast placement and prevents tracking under construction traffic.
- **Composite Interlayers:** Specialized hybrid moisture barriers designed to optimize inter-ply bonding strength and prevent moisture intrusion.

A substantial number of reinforced asphalt pavement sections constructed during the expansive testing eras of the 1980s and 1990s remain highly active in contemporary pavement engineering case studies, demonstrating quantifiable, long-term pavement benefits including significantly delayed reflective cracking, minimized localized maintenance intervention, and elongated overlay service cycles.

WHY IT ATTRACTED BROAD ADOPTION

Full-depth roadway reconstruction is exceptionally capital-intensive and disruptive. Reinforced asphalt overlays emerged as a vital, high-efficiency alternative enabling asset managers to:

- Effectively preserve existing underlying pavement assets.
- Defer massive full reconstruction capital expenditures.
- Drastically minimize aggregate lifecycle maintenance costs.

PRIMARY STRUCTURAL TRIGGERS FOR USE

Public and private civil engineering agencies routinely require specific structural glass reinforcement interlayers when facing specific environmental or structural constraints:

- When design overlay layers are thin or constrained by curb heights
- Where underlying structural fatigue cracking is severe.
- When the route is subject to exceptionally high traffic or axle loads.



ROADGLAS® MAT



ROADGLAS® GRID

WHY STOP AT MILL & FILL?

ENHANCE PAVEMENT LIFE WITH INTERLAYER DESIGN SOLUTIONS

Using interlayers in pavement rehabilitation creates minimal disruption while significantly improving long-term performance. Various interlayer systems are designed to combat reflective cracking caused by repeated traffic loads, asphalt aging, and temperature fluctuations. These solutions provide a more economical and durable alternative to thick asphalt overlays, which typically only offer temporary surface-level repair.

ROADGLAS® MAT

(WATERPROOFING REINFORCEMENT PAVING MAT)

The **ROADGLAS® Mat** is an advanced hybrid geosynthetic material that integrates fiberglass mesh within a high-performance polyester mat. Its non-woven structure enables asphalt binder to saturate the fabric, helping to seal the pavement and reduce moisture intrusion. The fiberglass component, coated with an elastomeric polymer, offers superior tensile strength at low-strain levels compared to traditional paving fabrics and mats. This added strength plays a key role in slowing the development of reflective cracking — a major factor in the deterioration and repair costs of asphalt overlays. **ROADGLAS® Mat** is engineered to perform even in the most demanding environmental conditions, delivering extended service life and improved overlay durability. This innovative interlayer system is proudly manufactured in the USA.

ROADGLAS® GRID

(PAVEMENT REINFORCEMENT GRID)

The **ROADGLAS® Grid** utilizes a high-performance fiberglass-reinforced matrix coated with an elastomeric polymer that provides substantially greater tensile strength at low-strain levels compared to conventional paving fabrics and mats. This increased tensile capacity at early strain stages enhances the overall structural integrity of the asphalt overlay system, effectively mitigating reflective cracking. By reducing crack propagation from underlying pavement layers, the **ROADGLAS® Grid** system contributes to longer service life and decreased maintenance frequency for asphalt overlay applications. This innovative interlayer system is proudly manufactured in the USA.

ELASTOMERIC POLYMER COATING

ROADGLAS® features an advanced elastomeric polymer coating that delivers ultimate defense against structural failure. This specialized formula provides a high-strength, flexible barrier that adapts to environmental stress without cracking.

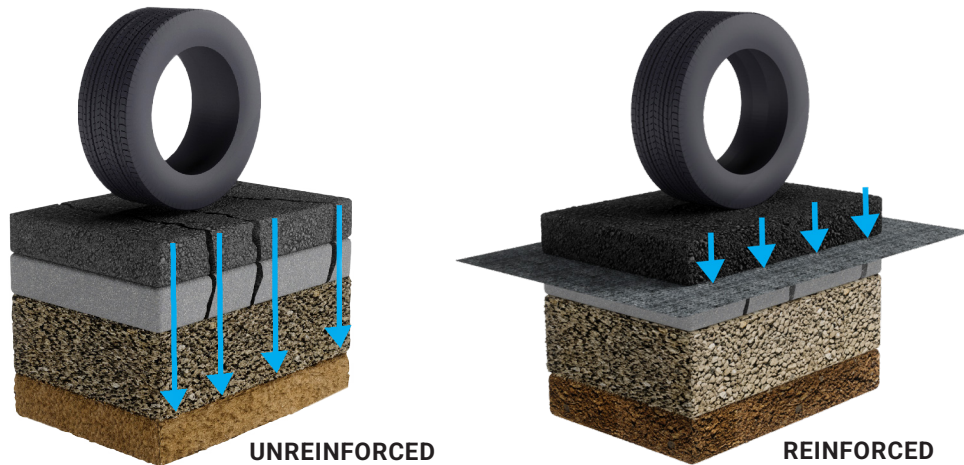
- **Thermal Activation:** Specially formulated to melt with the heat of asphalts, promoting increased bond strength between asphalt layers.
- **Strand Protection:** Shields vital fiberglass reinforcement strands from damage during the installation process.
- **Superior Waterproofing:** Delivers water resistance against moisture infiltration to the sub-base.

ROADGLAS® PAVING MAT

WATERPROOFING REINFORCEMENT MAT

REINFORCED MOISTURE BARRIER

The engineered matrix of the **ROADGLAS® Paving Mat** enables thorough asphalt binder saturation, allowing the binder to fill void spaces within the fabric and forms a continuous waterproof layer. This barrier significantly reduces moisture infiltration into the underlying pavement structure, which is essential for maintaining structural integrity and longterm performance. By minimizing water ingress—even under severe environmental conditions—the **ROADGLAS® Paving Mat** system enhances pavement durability and extends the overall service life of the roadway.



DELAY REFLECTIVE CRACKING

The **ROADGLAS® Paving Mat** utilizes a high-performance fiberglass reinforced matrix providing substantially greater tensile strength at low-strain levels compared to conventional paving fabrics and mats. This increased tensile capacity at early strain stages enhances the overall structural integrity of the asphalt overlay system, effectively mitigating reflective cracking. By reducing crack propagation from underlying pavement layers, the **ROADGLAS® Paving Mat** system contributes to longer service life and decreased maintenance frequency for asphalt overlay applications.

SIZED TO OPTIMIZE INSTALLATION EFFICIENCY

ROADGLAS® Paving Mats are manufactured in roll lengths allowing installation with fewer roll changes compared to heavier, shorter-length alternatives. The mats are placed with the light side facing downward on a properly prepared leveling course to ensure correct adhesion and alignment. **ROADGLAS® Paving Mats** are available in various widths to accommodate all streets and highways.

Custom rolls available upon request.

ROADGLAS® PAVING MAT

PRODUCT DATA SHEET

The high-performance **ROADGLAS®** hybrid fiberglass structure offers significantly greater tensile strength at low-strain compared to traditional non-woven paving fabrics. At low strain this increased strength helps extend pavement life by delaying reflective cracking while still serving as an effective moisture barrier.

Unlike polypropylene fabrics, fiberglass mats do not shrink or change dimensions when exposed to hot mix asphalt, preventing premature slippage or loss of bond. They require less hot liquid asphalt for installation than most other fabrics, resulting in a smaller carbon footprint. Additionally, with their higher tensile strength, fiberglass mats are more durable and less prone to on-site installation damage.

RoadGlas® Reinforced Paving Mat is coated with an elastomeric polymer coating to promote bond strength, waterproofing, and product protection during installation.

Product Properties	Test Method	RoadGlas® PM50		RoadGlas® PM100		RoadGlas® PM150	
		Metric	Imperial	Metric	Imperial	Metric	Imperial
>> Ultimate Tensile Strength (MD x XD)	ASTM 5035 EN-ISO 10319	50 x 50 kN/m	285 x 285 lbs/in	100 x 50 kN/m	571 x 285 lbs/in	150 x 50 kN/m	857 x 285 lbs/in
>> Tensile Elongation @ 2.0% (MD X XD)	ASTM 5035 EN-ISO 10319	40 x 40 kN/m	228 x 228 lbs/in	85 x 40 kN/m	485 x 228 lbs/in	100 x 45 kN/m	571 x 257 lbs/in
>> Reinforcement Fiberglass Strand Spacing ¹				<6.35	<0.25		
>> Tensile Elongation	ASTM 5035 EN-ISO 10319			<3.5	<3.5		
>> Young Modulus E				73,000 MPa	10.6 x 10 ⁶ psi		
>> Mass / Unit Area	ASTM 5261 ISO 9864	237 g/m ²	7.0 oz/yd ²	305 g/m ²	9.0 oz/yd ²	339 g/m ²	10 oz/yd ²
>> Melting Point	ASTM D276 EN-ISO 3146			>260°C	>500°F		
>> Asphalt Retention	ASTM D6140 EN-ISO 3146			0.47 l/m ²	0.1 gal/yd ²		
>> CBR Puncture Resistance	ASTM D6241	1780 N	400 lbs	2670 N	600 lbs	3340 N	750 lbs
>> Permeability	ASTM F1249			8.5x10 ⁻¹⁴ cm/sec	3.3x10 ⁻¹⁴ in/sec		
>> Recyclability without Screening	AASHTO T283-07			> 95% OF CONTROL			
>> Coating				ELASTOMERIC POLYMER			
> 60 min. Coating Solubility Test ²				PASS			

1. Nominal Dimension
2. Proper Testing for Coating: Submerge a 2" x 2" sample in D-Limonene or Paint Thinner for 60 min. The result is passing if the solvent remains clear.

ROADGLAS® IS THE REGISTERED TRADEMARK OF INDUSTRIAL FABRICS, INC. ROADGLAS® IS DISTRIBUTED IN THE UNITED STATES OF AMERICA. INDUSTRIAL FABRICS, INC. AND ROADGLAS® HAS NO CONTROL OVER AND DOES NOT WARRANT INSTALLATION DESIGN, INSTALLATION WORKMANSHIP, ACCESSORY MATERIALS, OR CONDITIONS OF APPLICATION. INDUSTRIAL FABRICS, INC. DOES NOT WARRANT THE PERFORMANCE OR RESULTS OF ANY INSTALLATION OR USE OF ROADGLAS®. THIS WARRANTY DISCLAIMER INCLUDES ALL IMPLIED WARRANTIES, STATUTORY OR OTHERWISE, INCLUDING THE WARRANTY OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. THE VALUES AND TOLERANCES WERE PROVIDED TO INDUSTRIAL FABRICS, INC. AFTER LABORATORY TESTING BY ACCREDITED TESTING INSTITUTIONS. ALL EMPIRICAL VALUES ARE APPROXIMATE. INDUSTRIAL FABRICS, INC. RESERVES THE RIGHT TO REVISE ANY PROVIDED SPECIFICATIONS.

ROADGLAS® PAVING MAT

PRODUCT APPLICATION GUIDE

PAVEMENT TYPE	TRAFFIC (ESALS)	WATERPROOFING REQUIRED	INCREASE HMA FATIGUE LIFE	ALLIGATOR CRACKING (AGING)	BLOCK CRACKING <0.25 IN.	BLOCK CRACKING >0.25 IN.	WARM REGION THERMAL CRACKING	COLD REGION THERMAL CRACKING	SAND SUBGRADE LANE WIDENING	CLAY SUBGRADE LANE WIDENING
Subdivision Roads, Parking Lots	<300K <1% Heavy	PM50	PM50	PM50 PM100	PM50 PM100	PM50 PM100	PM50 PM100	PM150	PM50 PM100	PM50
County Road	300,000 1,000,000 1-5% Heavies	PM50 PM100	PM100 PM150	PM50 PM100 PM150	PM50 PM100 PM150	PM50 PM100 PM150	PM50 PM100	PM150	PM100 PM150	PM100 PM150
Interstate Highways	>1M >5% Heavy	PM50 PM100	PM100 PM150	PM50 PM100 PM150	PM50 PM100 PM150	PM150	PM150	PM150	PM100 PM150	PM150
Airports	Aviation Traffic	PM50 PM100	PM100 PM150	PM50 PM100	PM50 PM100 PM150	PM150	PM150	PM150	PM100 PM150	PM150
Railyards and Industrial Facilities	Axle Loads >20kip	RG-PM50 RG-PM100	RG-PM50 RG-PM100	PM100 PM150	PM100 PM150	PM150	PM150	PM150	PM150	PM150

APPLICATION GUIDE DISCLAIMER:

THIS GUIDE IS INFORMATIONAL ONLY AND DOES NOT REPLACE PROJECT-SPECIFIC ENGINEERING, JUDGMENT OR SPECIFICATIONS. INTERLAYER PERFORMANCE DEPENDS ON SITE CONDITIONS AND CONSTRUCTION PRACTICES; NO WARRANTY OF PERFORMANCE IS EXPRESSED OR IMPLIED.

TACK COAT APPLICATION RATES



Asphalt Surfaces	Tack Coats	Tack Coat Rates	Equipment
Existing	PG 70, PG 76	0.20 - 0.25 gal/yd ² or >	Rubber tire roller to ensure paving mat tack coat bond
Milled	PG 70, PG 76	0.24 - 0.30 gal/yd ² or >	
New	PG 70, PG 76	0.20 - 0.25 gal/yd ² or >	

Surface Temperature for Tack Coat Selection

< 70 degrees	PG 70
> 70 degrees	PG 76

Tack rates and ranges shown should be verified in the field based upon the project's surface conditions and adjusted according to each project's actual surface conditions. The application rate may require higher application rates than the noted starting rate based upon each project's actual surface conditions.

TACK COAT FOR ASPHALT INTERLAYERS DISCLAIMER:

TACK COAT APPLIED BETWEEN ASPHALT INTERLAYERS IS INTENDED SOLELY TO PROMOTE ADHESION BETWEEN PAVEMENT COURSES. THE CONTRACTOR'S RESPONSIBILITY IS LIMITED TO PROPER APPLICATION IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND ACCEPTED INDUSTRY STANDARDS. THE CONTRACTOR MAKES NO EXPRESS OR IMPLIED WARRANTY REGARDING BOND STRENGTH, INTERLAYER PERFORMANCE, OR LONG-TERM PAVEMENT BEHAVIOR, AS PERFORMANCE IS DEPENDENT UPON SURFACE CONDITION, TEMPERATURE, MOISTURE, TRAFFIC, CONTAMINATION, MATERIAL COMPATIBILITY, AND SUBSEQUENT CONSTRUCTION ACTIVITIES BEYOND THE CONTRACTOR'S CONTROL.



ROADGLAS® PAVING MAT INSTALLATION PROCEDURES

SURFACE PREPARATION

1. Reinforced Paving Mats can be installed on existing, milled, or new pavement surfaces.
2. Per project engineer's direction, repair any potholes or damaged pavement and fill cracks more than ¼" (6mm) wide.
3. If pavement milling is required, the texture depth should not exceed ½ in. (12.5mm).
4. A leveling course is recommended for reinforcement paving mats installed over concrete surfaces. Asphalt leveling courses require a 24-hour cure period before placement of hot applied oil and/or paving mat products.
5. No dirt, water, oil, or other debris may be present on the pavement at time of installation. Installer must ensure pavement is clean by brooming or air blowing pavement until the surface is dust-free.

CAUTION: DO NOT install during any precipitation. Surface must be dry. Surface temperature must be between 45°F (7°C) and 140°F (60°C) during installation.

TACK COAT

During installation, the surface and ambient temperature must be a minimum of 45°F (7°C) and rising to provide adequate tack to hold the material in place. At surface temperatures of 75°F (24°C) and below, paving mat must be placed over tack coat immediately to ensure proper adhesion.

A hot, uniformly applied tack coat must be applied to the surface. For surface temperatures from 45°F (7°C) to 80°F (32°C), PG 70 (-10 to -34) is recommended. For temperatures from 80°F (32°C) and above, PG 76 (-10 to -34) is recommended.

To ensure full coverage, the tack coat must be applied to the full width of the reinforcement paving mat material plus an additional 2-4 inches on each side (50-100 mm).

Recommended Tack Coat Application Rates

Asphalt Surfaces	Tack Coats	Tack Coat Rates
Existing	PG 70, PG 76	0.20 - 0.25 gal/yd ² or >
Milled	PG 70, PG 76	0.24 - 0.30 gal/yd ² or >
New	PG 70, PG 76	0.20 - 0.25 gal/yd ² or >

METHOD OF PLACEMENT

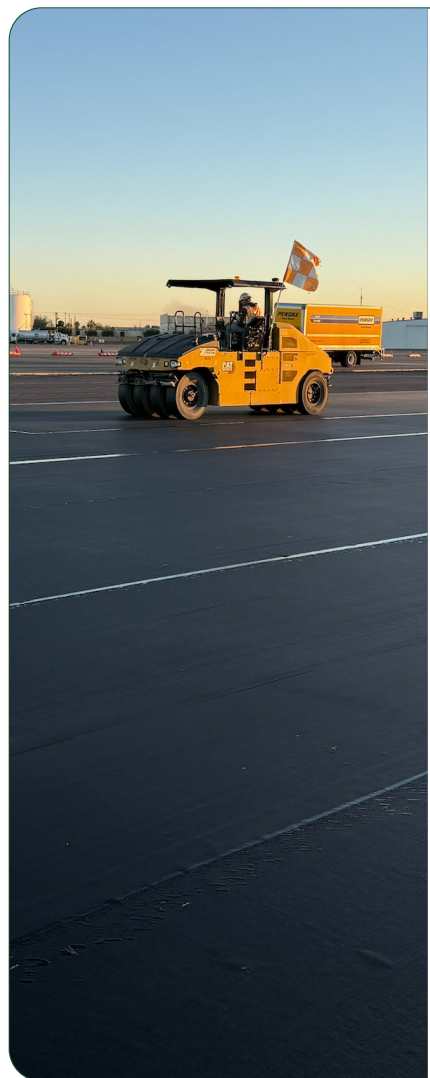
After placement of the hot applied tack coat, immediately place the reinforcement paving mat using proper laydown equipment with an attached fabric applicator, or other approved device. After placement, roll in with a pneumatic roller to ensure proper adhesion.

The reinforcement paving mat should be flat and free of wrinkles. Sufficient tension should be applied to the roll to reduce and eliminate ripples. Any wrinkles greater than 1 in. after rolling (25 mm) must be slit and lapped in the direction of pavement.

Overlaps must be a minimum 2 to 3 in. (50 mm to 75 mm) for longitudinal joints and a minimum 4 to 6 in. (100 mm to 150 mm) for transverse joints. For installation on curves, the material must be cut and laid by hand and overlapped accordingly to prevent excess wrinkles. Shingle the material in the direction of the asphalt paving installation.

CERTIFIED INSTALLER REQUIREMENTS

The certified installer must provide a list of not less than five (5) DOT and airport project installations, totaling a minimum of three million square yards of installed fiberglass reinforcement grids and/or fiberglass reinforcement paving mats. Projects must have been completed within the past five (5) years from the project bid date. Installer must provide to the Engineer of Record the following minimum information for each project: Project Name, Project Number, Project Location, Date of Project Installation, Type of Material Installed, Square yards of Installed Material.



INSTALLATION MAT Q&A

1. Is construction traffic allowed on the products during installation?

Necessary construction traffic is permitted. Steel drum rollers are prohibited.

2. Is public/transportation traffic allowed on the products during installation?

Minimal traffic is allowed; however, product should be covered by asphalt same day to minimize damage to the material.

3. How many linear lane miles can be installed on a standard 8-hour day under normal conditions?

An Industrial Fabrics, Inc. crew can install up to 4 to 6 miles of **ROADGLAS® PM** per day.

4. Can installed material stay uncovered overnight?

It is recommended that asphalt be applied over installed material same day or within 24 hours of installation. If material is left unpaved, material must be coned off from traffic, or light sanding applied on top before traffic is allowed. Sand must be removed prior to paving. Material and site to be inspected daily prior to asphalt application.

5. How do I repair damaged material?

Cut out as much damaged material as possible, retack area and install new material overlapping 6-8 inches.

6. What if material gets rained on?

Cease paving operations, no traffic allowed, wait until material is completely dry and then begin paving.

ROADGLAS® PAVING MAT

PROJECT SPECIFICATION

1.0 DESCRIPTION

Furnish and place a *heavy duty* waterproofing reinforcement paving mat within the pavement structure as a moisture barrier and stress relieving interlayer. The HD Paving mat must have an elastomeric polymer coating; bitumen coatings and/or non-coated products are not eligible for consideration.

- 1.1 **Quality Control.** Before installing the paving mat, arrange a meeting at the site with the manufacturer's representative and, where applicable, the paving mat installer. Notify the Engineer at least 3 days in advance of the time of the meeting. A manufacturer's representative must be present, at minimum, for the first day of installation of the engineered paving mat and available thereafter upon request by the Engineer.

2.0 MATERIALS

- 2.1 **Paving Mat.** Provide paving mat meeting the requirements in *Table 1*. Provide a copy of the manufacturer's specifications to the Engineer at the pre-construction meeting or no later than five working days prior to installation. Material must be certified manufactured in the USA.

The manufacturing facility of the reinforcement material must be ISO 9001 registered, and a certificate of compliance must be provided with the submittal, specifically, a quality management certificate pursuant to EN ISO 9001:2015 or current year certification covering the development, production, assessment, sale and application technology of geosynthetics and technical textiles.

The manufacturer must provide a list of not less than ten public project installations completed in the United States within the past 3 years, to include but not limited to the following minimum information: Project name, location, volume of material installed, and representative contact information. In addition, the manufacturer must provide documentation that a minimum of 2 million sq. yd. of the reinforcement material has been produced within the past 12 mo. This information must be provided at the time of submittal.

- 2.2 **Compliance.** All materials for this Project must comply with all applicable Build America, Buy America Act.

Build America, Buy America Act (BABA), part of the Infrastructure Investment and Jobs Act (IIJA) enacted on November 15, 2021, mandates a domestic content preference.

- 2.3 **Storage and Handling.** Store the paving mat in accordance with the manufacturer's recommendations in a dry covered condition free from dust, dirt, and moisture.

- 2.4 **Tack Coat.** Furnish PG70 or PG76 Asphalt Oil. The Engineer will obtain multiple samples of the tack coat binder per project. The Engineer will obtain the sample from the asphalt distributor immediately before and during the installation of the project. The rate will be shown on the plans and paid for separately. If not shown, a rate of .18 - .30 gpy must be used in accordance with manufacturer's recommendations.

ROADGLAS® PAVING MAT

PROJECT SPECIFICATION

TABLE 1: PAVING MAT PROPERTIES

Product Properties	Test Method	RoadGlas® PM50		RoadGlas® PM100		RoadGlas® PM150	
		Metric	Imperial	Metric	Imperial	Metric	Imperial
>> Ultimate Tensile Strength (MD x XD)	ASTM 5035 EN-ISO 10319	50 x 50 kN/m	285 x 285 lbs/in	100 x 50 kN/m	571 x 285 lbs/in	150 x 50 kN/m	857 x 285 lbs/in
>> Tensile Elongation @ 2.0% (MD X XD)	ASTM 5035 EN-ISO 10319	40 x 40 kN/m	228 x 228 lbs/in	85 x 40 kN/m	485 x 228 lbs/in	100 x 45 kN/m	571 x 257 lbs/in
>> Reinforcement Fiberglass Strand Spacing ¹				<6.35	<0.25		
>> Tensile Elongation	ASTM 5035 EN-ISO 10319			<3.5	<3.5		
>> Young Modulus E				73,000 MPa	10.6 x 10 ⁶ psi		
>> Mass / Unit Area	ASTM 5261 ISO 9864	237 g/m ²	7.0 oz/yd ²	305 g/m ²	9.0 oz/yd ²	339 g/m ²	10 oz/yd ²
>> Melting Point	ASTM D276 EN-ISO 3146			>260°C	>500°F		
>> Asphalt Retention	ASTM D6140 EN-ISO 3146			0.47 l/m ²	0.1 gal/yd ²		
>> CBR Puncture Resistance	ASTM D6241	1780 N	400 lbs	2670 N	600 lbs	3340 N	750 lbs
>> Permeability	ASTM F1249			8.5x10 ⁻¹⁴ cm/sec	3.3x10 ⁻¹⁴ in/sec		
>> Recyclability without Screening	AASHTO T283-07			> 95% OF CONTROL			
>> Coating				ELASTOMERIC POLYMER			
> 60 min. Coating Solubility Test ²				PASS			

1. Nominal Dimension

2. **Proper Testing for Coating:** Submerge a 2" x 2" sample in D-Limonene or Paint Thinner for 60 min. The result is passing if the solvent remains clear.

3.0 INSTALLATION

3.1 **Certified Installer Requirements.** The certified installer must provide a list of not less than five (5) DOT and airport project installations, totaling a minimum of three million square yards of installed fiberglass reinforcement grids and/or fiberglass reinforcement paving mats. Projects must have been completed within the past five (5) years from the project bid date. Installer must provide to the Engineer of Record the following minimum information for each project: Project Name, Project Number, Project Location, Date of Project Installation, Type of Material Installed, Square Yards of Installed Material.

3.2 **Surface Preparation.** Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing any material. Remove vegetation from pavement edges. Mill rutted and low spots in the pavement or place a leveling course as shown on the plans.

Do not place asphalt binder or the paving mat when weather conditions, in the judgment of the Engineer, are not suitable. Air and pavement temperatures must be sufficient to allow the tack coat to bond the paving mat in place. The air temperature must be a minimum of 45°F and rising for placement of the asphalt tack coat.

ROADGLAS® PAVING MAT

PROJECT SPECIFICATION

3.3 **Tack Coat.** Apply a uniform PG 70 and/or PG 76 tack coat at the specified rate unless otherwise directed. Apply the tack coat continuously, full coverage, to avoid streaks and other irregular patterns. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Apply tack coat to an area four inches wider than the paving mat, and wide enough to cover any overlaps. Do not allow traffic on the tack coat.

3.4 **Paving Mat Placement.** Place the paving mat immediately onto the tack coat with minimum folds or wrinkles. As directed by the Engineer, wrinkles or folds in excess of 1 in. must be slit and laid flat in the direction of the paving operation. Apply additional tack coat as needed to repaired areas, or to any other areas as directed by the Engineer, to achieve adequate bond to the substrate. Remove and replace the damaged paving mat with cuts, tears, or any other apparent damage, in accordance with the manufacturer's recommendations, at the general contractor's expense with the same type of material. Surface temperature must be 45°F or greater and rising at the time of installation.

Pneumatic tire rolling must be used to remove air bubbles and to maximize paving mat contact with the pavement surface, in accordance with the manufacturer's specifications and to the satisfaction of the Engineer. Longitudinal overlaps require 2-3 inches minimum. Transverse overlaps require 4-6 inches minimum.

Broadcast clean sand or loose asphalt to cover any excess tack coat that bleeds through the paving mat. Remove any excess sand from the paving mat prior to placing the HMA overlay.

Do not allow traffic, except necessary construction traffic or emergency vehicles, on the paving mat, unless approved by the Engineer. If traffic on the paving mat is approved by the Engineer, lightly broadcast clean sand over the paving mat. Remove any loose sand prior to paving.

Closely follow placement of the paving mat with the first lift of the HMA overlay. Place overlays on the same day, unless otherwise approved by the Engineer. In the event of rainfall on the paving mat prior to the placement of the first lift of HMA overlay, allow the paving mat to dry before the HMA is placed. To confirm material is dry, place a blue paper towel on paving mat and stand on it with your foot for 30 seconds. Engineer/Inspector must make final determination if product is fully dry.

4.0 MEASUREMENT

4.1 **Tack Coat.** Tack coat material will be measured in gallons at the applied temperature by strapping the distributor tank before and after road application.

4.2 **Paving Mat.** The paving mat will be measured by the square yard of roadway on which it is placed.

5.0 PAYMENT

The work perform "Measurement" will be paid for at the unit prices bid for "Paving Mat," and "Tack Coat" of the type and grade specified. This price is full compensation for cleaning the existing pavement, furnishing, preparing, hauling, and placing all materials; for all manipulation, including rolling, and for all labor, tools, equipment and incidentals necessary to complete the work.



Definitive Mitigation of Reflective Cracking & Structural Distress

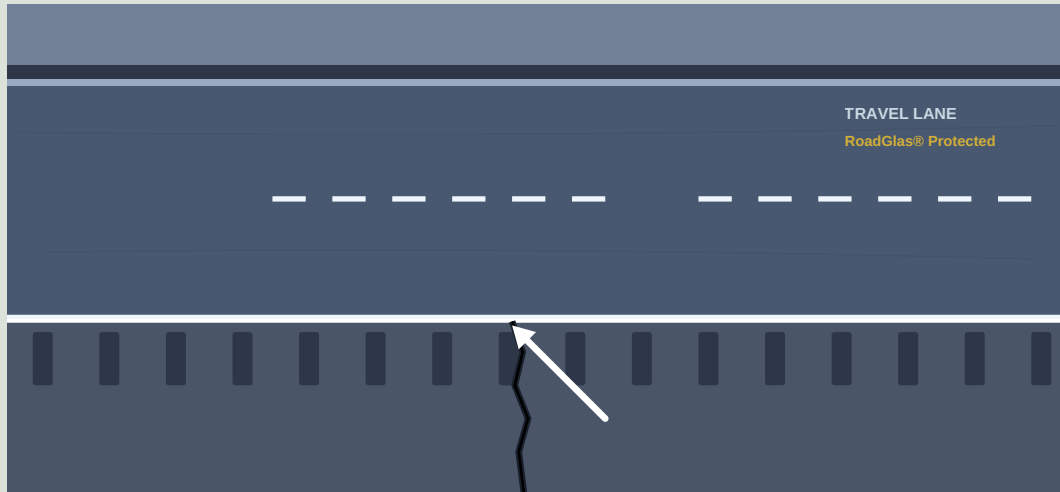


Figure 1: Visual evidence of field performance. Severe environmental cracks originating in the untreated shoulder propagate inward but **stop immediately** at the boundary of the travel lane reinforced with **RoadGlas®**.

Performance Overview

Reflective cracking remains one of the most critical accelerators of pavement degradation. As subgrade shifts and seasonal thermal contractions stress the asphalt matrix, untreated pavement inevitably yields to debilitating linear cracks.

The empirical field results showcased above highlight the definitive barrier performance of **ROADGLAS® Paving Reinforcement**. While the standard unreinforced shoulder exhibits prominent structural cracking that migrates directly toward the main roadway, the stress-absorbing properties of the **ROADGLAS®** composite interlayer successfully arrest the crack propagation at the joint line.

By combining high-tensile fiberglass reinforcement with a high-performance elastomeric polymer matrix, **ROADGLAS®** redistributes multi-directional horizontal shear stresses evenly across the paved surface, preventing localized fractures from reaching the surface course.

Why RoadGlas®?

- ✓ **Stress Absorption:** Dissipates heavy traffic loads and thermal strains before compromising the surface overlay.
- ✓ **Moisture Barrier:** Forms a highly impermeable layer that prevents surface water intrusion into vulnerable subbases.
- ✓ **Rapid Installation:** Optimized structure allows for direct application and fast, continuous paving rollouts.
- ✓ **Extended Lifespan:** Extends pavement maintenance cycles by up to 300%, cutting lifetime costs.

300% Extensions in Maintenance Cycles



ROADGLAS® REINFORCEMENT GRID PRESSURE ACTIVATED ADHESIVE BACKING

FATIGUE AND REFLECTIVE CRACKING IN PAVEMENTS

Fatigue and reflective cracking in asphalt pavements are typically induced by traffic loading, age-related hardening, or temperature cycling. Traditionally, these distresses have been mitigated by increasing the thickness of asphalt overlays. Each additional inch of overlay generally delays the reflection of existing cracks to the pavement surface by approximately one year.

ROADGLAS® GRID: EXTENDING PAVEMENT SERVICE LIFE

The **ROADGLAS® Reinforcement Grid** extends the service life of asphalt two to three times longer. This reinforcement grid matrix is composed of fiberglass strands coated with an elastomeric polymer. Fiberglass has high tensile strengths and low elongation properties. This is critical given that asphaltic concrete typically fails at low-strain levels.

When placing fiberglass strands between asphalt layers, the **ROADGLAS®** system effectively redirects vertical and horizontal stresses reducing reflective cracking. The system maintains a significant modulus advantage over asphalt at elevated temperatures while remaining flexible during low-temperature installation, ensuring performance across a wide range of climates.

EFFICIENT INSTALLATION AND PROVEN PERFORMANCE

The **ROADGLAS® Reinforcement Grid** can be installed quickly without specialized equipment or labor. Its pressure-activated adhesive enables rapid placement, making it one of the fastest interlayer systems to install. The system has demonstrated reliable performance in diverse environments, from hot desert regions to near-arctic conditions.



SUPERIOR PERFORMANCE OF THE ROADGLAS® PAVEMENT REINFORCEMENT GRID SYSTEM COMPARED TO ALTERNATIVE INTERLAYERS

Modern engineers have a variety of interlayer systems to choose from. These include asphalt-based binders combined with sand and/or aggregate, as well as one or more geosynthetic materials. Binder-based systems are thermally sensitive, becoming soft and pliable in warm conditions and brittle in cold conditions. Long-term aging also affects their performance. Bituminous slurry or chip seal interlayers, for example, provide short-term waterproofing but, even with modified binders, offer limited crack mitigation.

In contrast, geosynthetic interlayers, with their enhanced stiffness, uniform quality, and widespread availability, have proven effective over the past 30 years. Research indicates that the performance of a geosynthetic interlayer can be predicted from its material structure and strength properties.

SYSTEM STRUCTURE

Systems are classified as either open (e.g. **ROADGLAS® Reinforcement Grid** and steel mesh systems) or closed (e.g. composite grids and paving fabrics). Open-grid structures facilitate through-hole bonding and efficient stress transfer between the overlying and underlying asphalt layers. This mechanism is critical for preventing the propagation of traffic-induced cracks. In contrast, stress transfer in high-strain fabric-based interlayers relies on the weaker tensile bond formed between the asphalt binder and the fabric.

STRENGTH & REINFORCEMENT

Among available systems, only **ROADGLAS® Reinforcement Grid** and steel mesh interlayers provide sufficient tensile strength at strains below 3% to effectively resist crack propagation caused by traffic-loading or thermal movements.

ROADGLAS® REINFORCEMENT GRID

PRESSURE ACTIVATED - ADHESIVE BACKING

APPLICATIONS OF THE ROADGLAS® PAVING GRID SYSTEM

The **ROADGLAS® Reinforcement Grid** is suitable for use on nearly all asphalt concrete and composite pavement structures, including:

- **DOT Interstate Highways/Roads**
- **Airports**
- **Rail Yards / Industrial Facilities**
- **County / Parish Roads**
- **Residential and Commercial Parking Areas**
- **Port Facilities**

COST EFFECTIVE INVESTMENT

In normal overlay operations, with no reinforcement used, cracks do not have any resistance to migration to the surface. This accelerates pavement failure, allows water intrusion to the base, causing necessary crack sealing, accelerated maintenance, and often resulting in pothole failures.

Lack of structural reinforcement reduces traffic load capability and pavement service life.

In conventional pavement rehabilitation, an asphalt overlay is placed over existing rigid or flexible pavements. While this adds some service life, existing cracks often migrate toward the surface prematurely, as illustrated in **(Figure 1)**.

With the investment of the **ROADGLAS® Reinforcement Grid** used to reinforce asphalt, this system combines the compressive strength of the asphalt mix with the tensile strength of the fiberglass grid. When placed near the bottom of the overlay, the **ROADGLAS® Reinforcement Grid** intercepts cracks progressing upward, reduces tensile strains, and extends the overlay's service life. Cracks are absorbed and redirected horizontally, as shown in **(Figure 2)**. *RoadGlas® is to Asphalt what Rebar is to Concrete.*

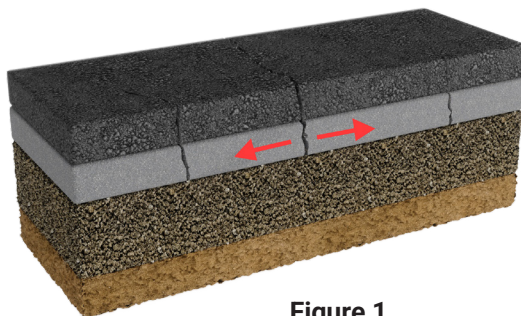


Figure 1
Unreinforced

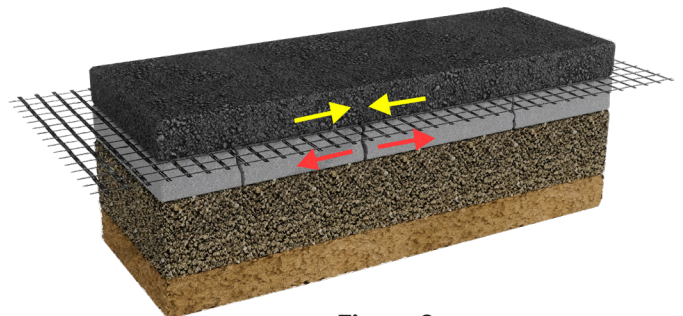


Figure 2
Reinforced

ROADGLAS® REINFORCEMENT GRID

PRODUCT DATA SHEET

Product Properties	Test Method	RoadGlas® RG100		RoadGlas® RG200	
		Metric	Imperial	Metric	Imperial
>> Ultimate Tensile Strength (MD x XD)	ASTM D6637 EN-ISO 10319	100 x 100 kN/m	571 x 571 lbs/in	100 x 200 kN/m	571 x1,142 lbs/in
>> Tensile Elongation	ASTM D6637 EN-ISO 10319	<3%			
>> Tensile Resistance @2% Strain (MD x XD)	ASTM D6637 EN-ISO 10319	80 x 80 kN/m	456 x 456 lbs/in	80 x 160 kN/m	456 x 913 lbs/in
>> Youngs Modulus E		73,000 MPa		10.6 x 10 ⁶ psi	
>> Mass / Unit Area	ASTM 5261 ISO 9864	405 g/m ²	12.0 oz/yd ²	610 g/m ²	18.0 oz/yd ²
>> Melting Point Coating	ASTM D276/EN-ISO 3146 ASTM C338	>232°C >820°C	>450°F >1508°F	>232°C >820°C	>450°F >1508°F
>> Grid Size (Center to Center of Strand)		25 x 25 mm	1.0 x 1.0	25 x 19 mm	1.0 x 0.75 in
>> Adhesive Backing		PRESSURE SENSITIVE			
>> Material & Coating		Fiberglass reinforcement with modified elastomeric polymer coating and pressure sensitive adhesive backing.			
>> 60 min. Coating Solubility Test ²		PASS			

The **ROADGLAS® Reinforcement Grid** helps prevent the migration of reflective cracks and extends the fatigue life of asphalt overlays. When installed between the leveling and surface courses, it acts as a hidden layer of strength, redirecting vertical crack stresses horizontally to effectively dissipate them, ultimately reducing the risk of cracks reappearing.

1. Nominal Dimension

2. Proper Testing for Coating: Submerge a 2" x 2" sample in D-Limonene or Paint Thinner for 60 min. The result is passing if the solvent remains clear.

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ROADGLAS® REINFORCEMENT GRID

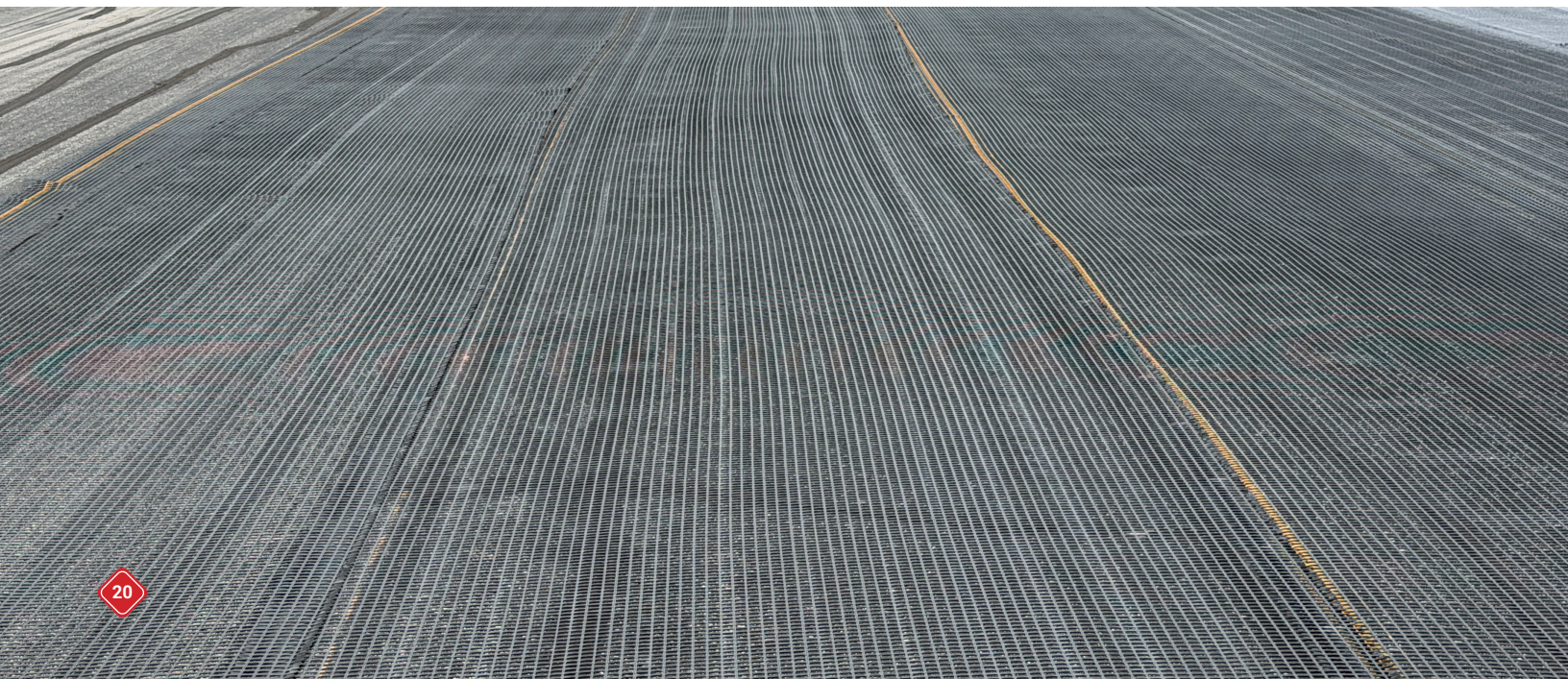
PRODUCT APPLICATION GUIDE

PRODUCT SELECTION TABLE BY CRACK DISTRESS TYPE

PAVEMENT TYPE	TRAFFIC (ESALS)	INCREASE HMA FATIGUE LIFE	ALLIGATOR CRACKING (Aging)	BLOCK CRACKING >0.25	BLOCK CRACKING >0.25	PCC JOINT REFLECTIVE CRACKS	THERMAL CRACKING WARM REGION	THERMAL CRACKING COLD REGION	LANE WIDENING CRACKS (Sand Subgrade)	LANE WIDENING CRACKS (Clay Subgrade)
Product is Applied			Full Width			Full Width or Detail Repair	Detail Repair			
Tennis Courts, Bike Trails, Golf Cart Paths, Residential Streets, Parking Lots, Minor Roads	<300K <1% Heavies	See RG-PM	See RG-PM	RG100	RG100	RG100	RG100	RG200	RG100	RG100
County or Municipal Connector Roads	300,000 - 1,000,000 1-5% Heavies	RG100	See RG-PM	See RG-PM	See RG-PM	RG200	RG100	RG200	RG200	RG200
Inter-Urban Roads & Interstate Highways	> 1M >5% Heavies	RG100	See RG-PM	See RG-PM	RG100 RG200	RG200	RG100	RG200	RG200	RG200
Airports - Private & Municipal	General-Aviation Traffic	RG100	RG100	See RG-PM	RG100 RG 200	RG200	RG100 RG200	RG200	RG200	RG200
Airports - Regional & International	Commercial Traffic	RG100	RG200	RG200	RG100 RG 200	RG200	RG 200	RG 200	RG200	RG200
Industrial Ports & Intermodal Facilities	Axle Loads >20kp	RG100	RG200	RG200	RG100 RG200	RG200	RG200	RG200	RG200	RG200

APPLICATION GUIDE DISCLAIMER:

THIS GUIDE IS INFORMATIONAL ONLY AND DOES NOT REPLACE PROJECT-SPECIFIC ENGINEERING JUDGMENT OR SPECIFICATIONS. INTERLAYER PERFORMANCE DEPENDS ON SITE CONDITIONS AND CONSTRUCTION PRACTICES; NO WARRANTY OF PERFORMANCE IS EXPRESSED OR IMPLIED.



ROADGLAS® REINFORCEMENT GRID

PRODUCT APPLICATION GUIDE



Asphalt Surfaces	Tack Coats	Tack Coat Rates	Equipment
NOT RECOMMENDED FOR MILLED SURFACES			Rubber tire roller to ensure grid-tack coat bond
Existing	Hot Applied Track Free	0.25 - 0.30 gal/yd or greater	
New	Hot Applied Track Free	0.20 - 0.25 gal/yd or greater	
Recommended Tack Coats			
UltraFuse Bond Seal	ultra-fuse.com		
Jebro, Inc. Polymer Modified	jebro.com		
Asphalt Cement Underseal			
Membrane			

Surface Temperature Tack Coat Selection

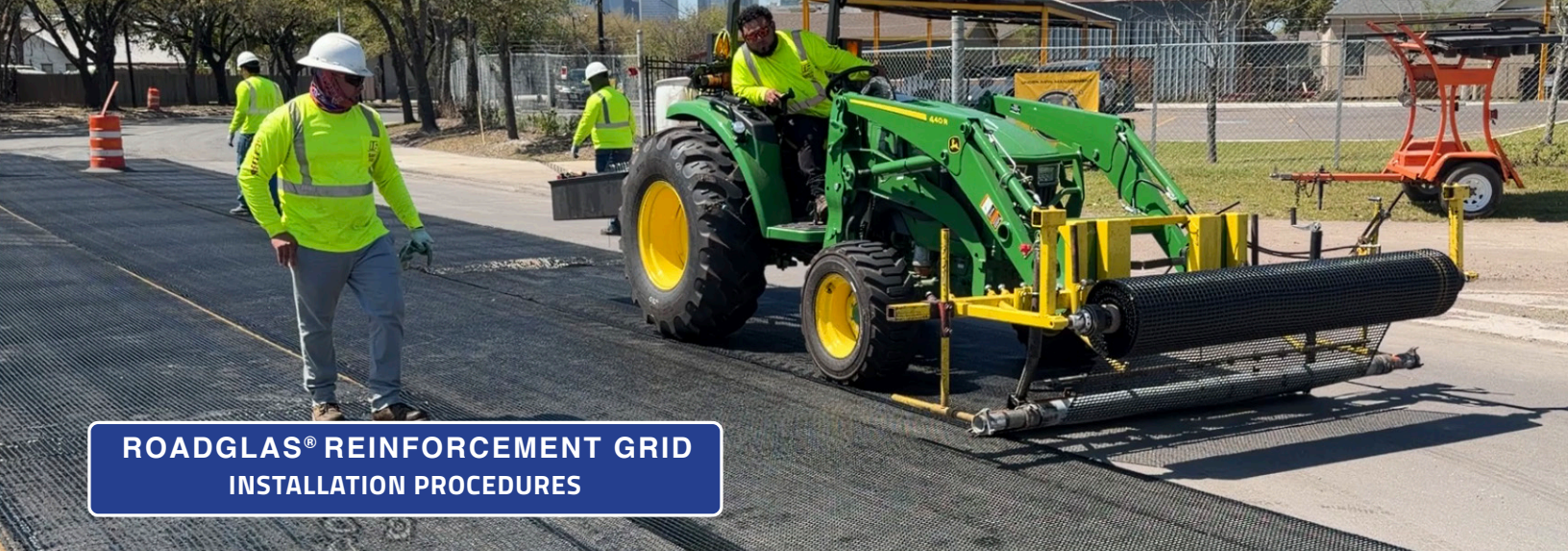
All Tack Coats temperature recommend 45 degrees and rising

Tack rates and ranges shown should be verified in the field based upon the project's surface conditions and adjusted according to each projects actual surface conditions. The application rate may require higher application rates than the noted starting rate based upon each projects actual surface conditions.



TACK COAT FOR ASPHALT INTERLAYERS DISCLAIMER:

TACK COAT APPLIED BETWEEN ASPHALT INTERLAYERS IS INTENDED SOLELY TO PROMOTE ADHESION BETWEEN PAVEMENT COURSES. THE CONTRACTOR'S RESPONSIBILITY IS LIMITED TO PROPER APPLICATION IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND ACCEPTED INDUSTRY STANDARDS. THE CONTRACTOR MAKES NO EXPRESS OR IMPLIED WARRANTY REGARDING BOND STRENGTH, INTERLAYER PERFORMANCE, OR LONG-TERM PAVEMENT BEHAVIOR, AS PERFORMANCE IS DEPENDENT UPON SURFACE CONDITION, TEMPERATURE, MOISTURE, TRAFFIC, CONTAMINATION, MATERIAL COMPATIBILITY, AND SUBSEQUENT CONSTRUCTION ACTIVITIES BEYOND THE CONTRACTOR'S CONTROL.



ROADGLAS® REINFORCEMENT GRID INSTALLATION PROCEDURES

PREPARING THE SURFACE FOR GRID

1. Per project engineer's direction, repair any potholes or damaged pavement and fill cracks more than ¼" (6mm) wide. If pavement milling is required, a leveling course will be required prior to placement of the grid.
2. Asphalt leveling courses require a minimum 24-hour cure period before placement of hot applied oil and/or interlayer products.
3. Installer must ensure pavement is smooth, clean and dry by brooming or air blowing pavement until the surface is dust-free.
4. **DO NOT** install during any precipitation. Surface must be dry. If it starts to rain, installation of the grid must cease and all traffic must avoid the areas that are already installed. In the event of rainfall on the paving mat prior to the placement of the first lift of HMA overlay, allow the paving mat to dry before the HMA is placed. To confirm material is dry, place a blue paper towel on paving mat and stand on it with your foot for 30 seconds. Engineer/Inspector must make final determination if product is fully dry. Installation/paving may resume after allowing the exposed grid to dry completely.
5. Surface temperature must be between 45°F (7°C) and 140°F (60°C) during installation.

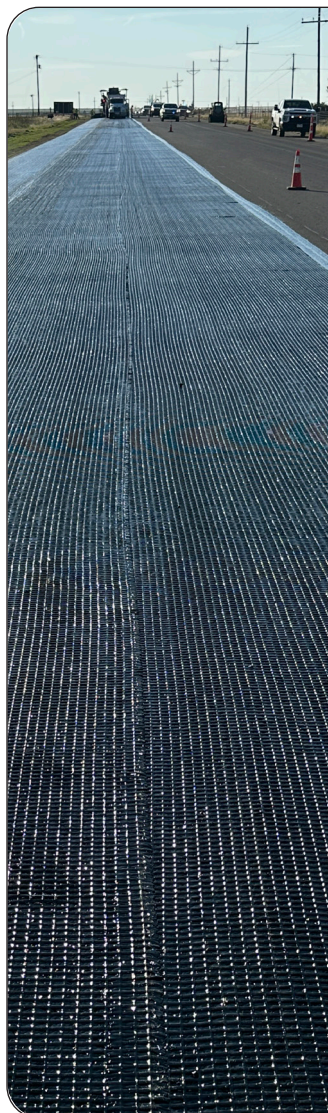
TACK COAT AND GRID PLACEMENT

1. Place self-adhesive grid onto existing or leveled-up pavement surface. Milled surfaces are prohibited. Place the reinforcement grid using a laydown tractor or other approved device. Sufficient tension should be applied to the roll to reduce and eliminate wrinkles.
2. Overlaps must be a minimum of 2 inches (5 cm) for longitudinal joints and a minimum of 6 inches (15 cm) for transverse joints. For installation on curves, the material must be cut and laid by hand and overlapped accordingly to prevent excess wrinkles. Shingle the material in the direction of the asphalt paving operation.
3. After grid placement, spray hot-applied trackless tack, Jebro or UltraFuse, on top of self-adhesive grid at manufacturer's recommended application rate.
4. Roll tack coat with pneumatic rubber tire roller to minimize/eliminate all wrinkles.



CERTIFIED INSTALLER REQUIREMENTS

The certified installer must provide a list of not less than five (5) DOT and/or airport project installations, totaling a minimum of three million square yards of installed fiberglass reinforcement grids and/or fiberglass reinforcement paving mats. Projects must have been completed within the past five (5) years from the project bid date. Installer must provide to the Engineer of Record the following minimum information for each project: Project Name, Project Number, Project Location, Date of Project Installation, Type Material Installed, Square Yards of Installed Material.



INSTALLATION GRID Q&A

1. Is construction traffic allowed on the products during installation?

Once tack coat has cured, and rolling with pneumatic roller is completed, all construction traffic is permitted. Steel drum rollers are prohibited.

2. Is public/transportation traffic allowed on the products during installation?

Minimal traffic is allowed; however, product should be covered by asphalt same day to minimize damage to the material.

3. How many linear lane miles can be installed on a standard 8-hour day under normal conditions?

An Industrial Fabrics, Inc. crew can install up to 3 to 4 miles for **ROADGLAS® RG** per day. (Average one mile every 2 hours)

4. Can installed material stay uncovered overnight?

It is recommended that asphalt be applied over installed material the same day or within 24 hours of installation. Material and site must be inspected daily prior to asphalt application.

5. How do I repair damaged material?

Cut out as much damaged material as possible. Install new material overlapping 6-8 inches. Retack area with rubber tire roller on the repaired area.

6. What if material gets rained on?

Cease paving operations, no traffic allowed, wait until material is completely dry and then begin paving.

7. What is the minimum asphalt overlay thickness required?

HMA Asphalt overlay must be a minimum of 1.5 inches
TOM Asphalt overlay must be a minimum of 1.0 inches

ROADGLAS® REINFORCEMENT GRID

PROJECT SPECIFICATION

1.0 DESCRIPTION

Furnish and place reinforcing grid for asphalt pavement.

2.0 MATERIALS

- 2.1 **Grid.** Provide a uniform, glass-fiber grid 100% coated with a synthetic elastomeric polymer and a self-adhesive backing. All other coatings, and non-coated products are prohibited.

One of the following two types:

- Type 1 (RG100): Placement over entire width of roadway
- Type II (RG 200): Placement over entire width of roadway, transverse and longitudinal joints

Provide a grid capable of:

- Resisting damage and maintain dimensional stability during construction
- Resisting chemical and biological degradation by the material being reinforced
- Meeting the requirements of Table 1

Provide rolls of grid in widths appropriate to the work being performed. Each roll must be packaged in a protective wrap to prevent damage under normal storage and handling, including ultraviolet degradation, and must be identified with a tag or label securely affixed to the outside of the roll on or near one end, displaying the following information:

- Unique roll number, serially designated
- Manufacturer's lot number or control numbers, if any
- Name of manufacturer
- Brand name of product
- Style or catalog designation of the product
- Roll width and length

Store the grid in dry covered conditions free from dust and moisture. Stock vertically to avoid misshapen rolls. Do not use misshapen rolls or rolls stored in direct sunlight unless otherwise approved by the Engineer.

- 2.2 **Sampling.** Sampling of reinforcement grid is performed in accordance with Texas Test Method Tex-735-I, "Sampling Construction Fabrics" or owner approved method.

- 2.3 **Tack Coat.** Provide hot applied tack free tack coat binder in accordance with the governing specification for the HMA mixture.

- 2.4 **Compliance.** All materials for this Project must comply with all applicable Build America, Buy America Act.

Build America, Buy America Act (BABA), part of the Infrastructure Investment and Jobs Act (IIJA) enacted on November 15, 2021, mandates a domestic content preference.

ROADGLAS® REINFORCEMENT GRID

PROJECT SPECIFICATION

The Department will collect at least one sample from the project and test for acceptance. The Department will sample and test all materials; however, the Contractor must be responsible for the costs of sampling and testing failing materials. Costs of sampling and testing failing materials will be assessed at the rate established by the Director of the Materials and Pavements Section of the Construction Division and in effect at the time of testing.

Product Properties	Test Method	RoadGlas® RG100		RoadGlas® RG200	
		Metric	Imperial	Metric	Imperial
>> Ultimate Tensile Strength (MD x XD)	ASTM D6637 EN-ISO 10319	100 x 100 kN/m	571 x 571 lbs/in	100 x 200 kN/m	571 x 1,142 lbs/in
>> Tensile Elongation	ASTM D6637 EN-ISO 10319	<3%			
>> Tensile Resistance @2% Strain (MD x XD)	ASTM D6637 EN-ISO 10319	80 x 80 kN/m	456 x 456 lbs/in	80 x 160 kN/m	456 x 913 lbs/in
>> Youngs Modulus E		73,000 MPa		10.6 x 10 ⁶ psi	
>> Mass / Unit Area	ASTM 5261 ISO 9864	405 g/m ²	12.0 oz/yd ²	610 g/m ²	18.0 oz/yd ²
>> Melting Point Coating	ASTM D276/EN-ISO 3146 ASTM C338	>232°C >820°C		>450°F >1508°F	
>> Grid Size (Center to Center of Strand)		25 x 25 mm	1.0 x 1.0	25 x 19 mm	1.0 x 0.75 in
>> Adhesive Backing		PRESSURE SENSITIVE			
>> Material & Coating		Fiberglass reinforcement with modified elastomeric polymer coating and pressure sensitive adhesive backing.			
>> 60 min. Coating Solubility Test ²		PASS			

1. Nominal Dimension

2. Proper Testing for Coating: Submerge a 2" x 2" sample in D-Limonene or Paint Thinner for 60 min. The result is passing if the solvent remains clear.

3.0 EQUIPMENT

- 3.1 **Grid Placement Equipment.** Provide a mechanical lay-down unit capable of laying the grid uniformly at the full width. Lay down unit must be capable of applying sufficient tension to the roll to eliminate wrinkles.
- 3.2 **Rollers.** Unless otherwise shown on the plans, furnish light pneumatic-tire rollers in accordance with **Item 4.6, "Rolling."**

ROADGLAS® REINFORCEMENT GRID

PROJECT SPECIFICATION

4.0 CONSTRUCTION

Install reinforcing paving grid and tack coat on existing surface or leveling course as required.

CERTIFIED INSTALLER REQUIREMENTS. The installer must provide a list of not less than five (5) DOT project installations, totaling a minimum of three million square yards of installed fiberglass asphalt reinforcement paving grids. Projects must have been completed within the past five (5) years. Installer must provide to the Engineer of Record the following minimum information for each project: Project Name, Project Number, Project Location, Date of Project Installation, Type of Material Installed, Square Yards of Installed Material.

- 4.2 **LEVELING COURSE.** Install a leveling course of asphaltic concrete of the specified type over any areas showing excessive surface irregularities, cracking, rough joints, or other areas as directed. Saw cut slab joints to relieve pressure as directed. Allow the leveling course to cure for a minimum of 24 hours and cool to below 110°F surface temperature before installing the grid.
- 4.3 **GRID PLACEMENT.** Place the grid when the surface temperature is between 45°F and rising. Verify the surface is dry and clean before placing the grid. Place the grid by mechanical means, or by hand where necessary, using sufficient tension to prevent wrinkles. Remove any wrinkles that do form by pulling those areas tight. Use relief cuts as necessary in tight curves to prevent ripples. Overlap transverse joints to a minimum of 6 in., and longitudinal joints 2 in. to 3 in., or more if recommended by the manufacturer. Place the grid over any manhole covers, drains, grates, or other fixtures in the roadway. Cut these sections out once all repairs and corrections have been made.
- 4.4 **DAMAGE OR IRREGULARITIES.** Remove and replace any sections of grid showing damage, debonding, poor adhesion, wrinkles, or other irregularities as directed. Overlap new sections of grid with in-place sections a minimum of 6 in. to 8 in.
- 4.5 **ADHESIVE BOND TESTING.** Perform adhesive bond testing on the rolled grid once every 3000 ft² and when directed. Use a spring suspension scale to hook a rib of the grid, and slowly pull upward. Grid that begins to separate from the surface with less than a 10 lb pull may be deemed poor adhesion. Perform adhesive bond testing on installed grid or on a test strip as directed.
- 4.6 **HOT APPLIED TACK COAT.** A hot applied track free tack coat material must be used. Apply the hot applied tack coat after installation of the grid, then roll tack coat on top with rubber tire roller, unless otherwise directed. Apply tack coat as described in the governing specification for the asphalt concrete mixture at the rate specified or selected by the Engineer. If so directed, shoot a test strip at a location selected by the Engineer prior to tack coat application to verify the tracking resistance.
- 4.7 **EMULSION TACK COAT.** Emulsion based tack coat materials are *not recommended*. However, if trackless emulsion tack coat material is used, apply the tack coat after installation of the grid, then roll tack coat on top with rubber tire roller, unless otherwise directed. Apply tack coat as described in the governing specification for the asphalt concrete mixture at the rate specified or selected by the Engineer. Tack coat must be fully cured and all moisture fully evaporated before construction equipment is placed on the material. Do not allow construction traffic on the tack coat until it has cured sufficiently to become tracking resistant. If so directed, shoot a test strip at a location selected by the Engineer prior to tack coat application to verify the tracking resistance.

ROADGLAS® REINFORCEMENT GRID

PROJECT SPECIFICATION

- 4.8 **ROLLING.** Roll the grid before allowing any construction traffic. Roll for three to five passes or as directed to ensure the grid adheres to the underlying layer. Keep roller tires clean and asphalt-free. Avoid tight turning movements and rapid starts or stops that may damage the grid.
- 4.9 **OVERLAY PLACEMENT.** Install the asphalt concrete overlay on the same day the grid is placed. Protect the grid until placement of the overlay by limiting traffic to normal construction vehicles. Repair any damaged sections prior to placement of the overlay. HMA asphalt overlays must be a minimum of 1.5 in. TOM asphalt overlays must be a minimum of 1.0 in.

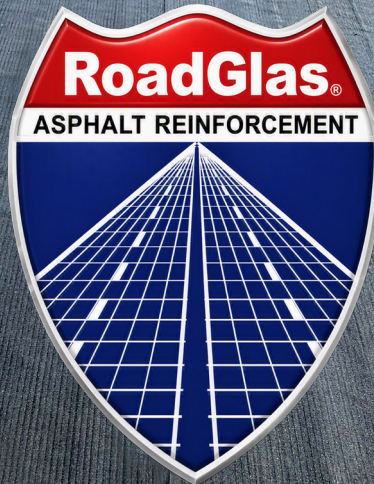
5.0 MEASUREMENT

- 5.1 **FULL WIDTH APPLICATIONS.** The reinforcing grid will be measured by the square yard of pavement containing grid.
- 5.2 **CRACK AND JOINT REPAIRS.** The reinforcing grid will be measured by the linear foot of joint or crack repaired.

6.0 PAYMENT

The work performed and materials furnished in accordance with this product and measured as provided under "Measurement" will be paid for at the unit price bid for "Reinforcing Paving Grid for Asphalt Pavement (TYPE I)" for full width applications; or for "Reinforcing Paving Grid for Asphalt Pavement (TYPE II)" for joint and crack repairs. These prices are full compensation for surface preparation; furnishing, preparing, hauling, and placing materials; rolling, testing, repairs; and equipment, labor, tools, and incidentals.





Pound For Pound | Stronger Than Steel

RoadGlas® is to Asphalt What Rebar is to Concrete



Industrial Fabrics, Inc.
5102 Galveston Road
Houston TX 77017
800 848 4500



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