Tensar®

PAVEMENT REINFORCEMENT

PRODUCT SELECTION GUIDE

Choose the Pavement Reinforcement System That is Right for Your Application

GLASGRID®

The GlasGrid® Pavement Reinforcement System provides additional support to resist the migration of reflective cracks in pavement applications, thus reducing maintenance and life-cycle costs. The GlasGrid System has proven to be effective in every geographical areaand climate – from desert environments to near arctic conditions. Manufactured by Saint-Gobain ADFORS in Albion, New York, this interlayer system is composed of a series of fiberglass strands coated with an elastomeric polymer and formed into a grid structure. Each strand has a remarkably high tensile strength and high modulus of elasticity; this is particularly important as asphalt concrete typically cracks at low strains. And now GlasGrid TF, the newest product in the GlasGrid System, is the only pavement reinforcement to include a pre-installed tack film that offers faster installation, improved performance and savings on labor, time and material costs.

With proper design and placement, interlayers can add traffic capacity to the aslphalt pavement.

GLASPAVE®

A hybrid geosynthetic paving material, GlasPave® is a unique combination of fiberglass mesh embedded into high performance polyester mats. The non-woven matrix structure of GlasPave allows for an asphalt binder to penetrate and fill voids within the fabric to limit moisture infiltration into a pavement structure. The fiberglass matrix in a GlasPave paving mat coated with an elastomeric polymer provides significantly greater tensile strength at low strain when compared to conventional paving fabrics and other paving mats. This higher strength helps extend pavement life by delaying reflective cracking, which is a common contributor to costly repairs and the eventual failure of asphalt overlay applications. Even in the harshest environments, GlasPave can provide significant improvement to the service life of the overlay.

Selection of HMA Pavement Reinforcement

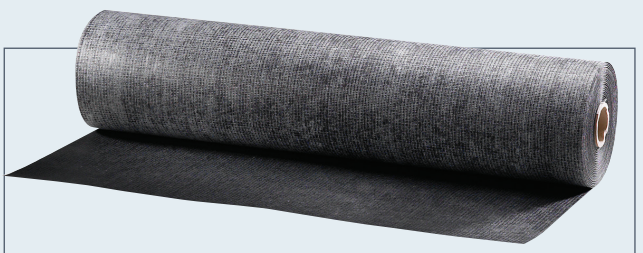
HMA reinforcement is a cost-effective and easy solution to extend the service life of asphalt overlay applications. Tensar offers two geosynthetic interlayer systems that improve the performance of asphalt layers in new construction and pavement rehabilitation. The stress absorbing GlasGrid® Pavement Reinforcement System offers superior stiffness characteristics along with an open aperture to ensure through-hole bonding of asphalt layers. This unique combination of features makes the GlasGrid System the optimum choice for heavy- and medium-duty overlay projects in terms of performance and total life-cycle cost savings. The GlasPave® Waterproofing Paving Mat combines the waterproofing ability of a polyester mat with the high modulus of fiberglass netting to yield a cost-effective reflective crack mitigation solution for light- to medium-duty pavement overlay projects.

Proper selection of a pavement reinforcement is critical to ensure the asphalt overlay service life is realized for the intended design. This selection guide offers assistance for choosing the appropriate product depending upon:

- Pavement Type
- Anticipated Traffic
- Need for Waterproofing
- Existing Distress Type

In all cases, a minimum of 1.5 in. of compacted asphalt must be installed on top of the reinforcement to carry the design traffic. In projects where rut sensitive asphalt mixes are likely, or there are areas with high potential for traffic induced rutting, then the minimum compacted overlay thickness must be increased to 2 in.

TWO TYPES OF HMA REINFORCEMENT ARE AVAILABLE TO MEET YOUR REQUIREMENTS



GLASPAVE®

Product	Roll Width	Roll Length
GlasPave 25	150 in. (3.81 m)	120 yd (109.73 m)
GlasPave 25	120 in. (3.05 m)	120 yd (109.73 m)
GlasPave 50	150 in. (3.81 m)	120 yd (109.73 m)
GlasPave 50	120 in. (3.05 m)	120 yd (109.73 m)

GLASGRID®

*Standard roll width size for GlasGrid products is 5 ft (1.5 m).

Product	Aperture Size	Roll Length*
GG8550	1 in. x 1 in. (25 mm x 25 mm)	492 ft (150 m)
GG8501	0.5 in. x 0.5 in. (12.5 mm x 12.5 mm)	327 ft (100 m)
GG8501 TF	0.5 in. x 0.5 in. (12.5 mm x 12.5 mm)	327 ft (100 m)
GG8511	1 in. x 1 in. (25 mm x 25 mm)	327 ft (100 m)
GG8511 TF	1 in. x 1 in. (25 mm x 25 mm)	327 ft (100 m)
GG8502	0.5 in. x 0.5 in. (12.5 mm x 12.5 mm)	197 ft (60 m)
GG8512	1 in. x 0.75 in. (25 mm x 19 mm)	197 ft (60 m)

GlasGrid® and GlasPave® Product Selection Guide

This guide is intended to offer general assistance in product selection. The products types have been selected for a severity rating of the distress types referenced in this guide as only “Fair to Poor” and not “Very Poor.” The extent of the distress types is considered to be 75% of full coverage. Tensar highly recommends contacting your local Tensar Representative or calling 800-TENSAR-1 for more detailed information or for help designing with interlayers and increased traffic capacity.

Pavement Type	Traffic [ESALS]	Waterproofing Required	Increase HMA Fatigue Life	Product Selection Table by Crack Distress Type[1]							
				Alligator Cracking (Aging) ☐	Block Cracking < 0.25 in.	Block Cracking > 0.25 in.	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**			**Full Width or Detail Repair**	**Detail Repair**			
Tennis Courts, Bike Trails, Golf Cart Paths, Residential Streets, Parking Lots, Minor Country Roads	< 300K < 1% Heavies	GlasPave25		GlasPave25 GG8550	GlasPave25 GG8550	GlasPave25 GG8501● GG8511●	GG8501● GG8511●	GlasPave25 GG8501● GG8511●	GG8502 GG8512●	GlasPave25 GG8550 GG8501● GG8511●	GlasPave25 GG8501● GG8511●
County or Municipal Connector Roads	300,000 – 1,000,000 1–5% Heavies	GlasPave25 GlasPave50	GG8501TF GG8511TF	GlasPave25 GlasPave50	GlasPave25 GlasPave50 GG8501● GG8511●	GlasPave50 GG8501● GG8511●	GG8502 GG8512●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GlasPave50 GG8501● GG8511● GG8502 GG8512●
Inter-Urban Roads or Interstate Highways	> 1M > 5% Heavies	GlasPave50	GG8501TF GG8511TF	GlasPave50 GG8501● GG8511●	GlasPave50 GG8501● GG8511●	GG8501● GG8511●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●
Airports – Private/Municipal	General Aviation Traffic	GlasPave25 GlasPave50	GG8501TF GG8511TF	GlasPave25 GlasPave50 GG8501● GG8511●	GlasPave25 GlasPave50 GG8501● GG8511●	GlasPave50 GG8501● GG8511●	GG8502 GG8512●	GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●
Airports – Regional/International	Commercial Traffic	GlasPave50	GG8501TF GG8511TF	GlasPave50 GG8501● GG8511●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●
Industrial Ports or Intermodal Facilities	Axle Loads > 20kip	GlasPave50	GG8501TF GG8511TF	GlasPave50 GG8501● GG8511●	GlasPave50 GG8501● GG8511● GG8502 GG8512●	GG8501● GG8511● GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●	GG8502 GG8512●

LEGEND

- Moisture barrier for fatigued and cracked asphalt
- △ To increase pavement life or reduce HMA layer thickness
- ☐ Crack pattern is typically found full width
- ■ Load transfer efficiency > 60% using falling weight deflectometer (FWD)
- ◆ Southern N. America, S. America
- ○ Northern N. America, Canada, including areas with extreme daily thermal fluctuations
- ✦ Time to achieve 90% consolidation < 6 months
- ✱ Time to achieve 90% consolidation > 6 months
- ● GlasGrid or GlasGrid TF available

GlasGrid® is manufactured at an ISO 9001:2008 registered facility of Saint-Gobain ADFORS. GlasGrid is a registered trademark of Saint-Gobain ADFORS. U.S. Patent 5393559. Canadian Patent 1240873. European Patents WO 2009/021040, WO 2009/021046, WO 2009/021051. Japanese Patent 2611064. Additional patents pending. GlasPave™ 25 is designed to meet ASTM D7239, “Hybrid Geosynthetic Paving Mat for Highway Applications” Type 1. GlasPave 50 is designed to meet ASTM D7239, “Hybrid Geosynthetic Paving Mat for Highway Applications” Type 1.

1 Section 1, DISTRESSES FOR PAVEMENTS WITH ASPHALT CONCRETE SURFACES, “Distress Identification Manual for the Long-Term Pavement Performance Program” Federal Highway Administration, PUBLICATION NO. FHWA-RD-03-031 JUNE 2003. To access this document online go to http://www.tfhrc.gov/ pavement/ltpp/reports/03031/index.htm

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