Saint-Gobain ADFORS

World-class capabilities. Worldwide reach.

GlasGrid® is manufactured by Saint-Gobain ADFORS. Saint-Gobain ADFORS is a global company within the Innovative Materials Branch of Compagnie de Saint-Gobain. We are an industry leader in the manufacture and distribution of a wide range of reinforcement fabrics. We offer a diverse selection of products, including some of the world's best-known reinforcement brand names.

Our worldwide manufacturing plants ensure reliability, quality and cost-effective material supply, while our research facilities and global sales offices deliver world-class service. We are committed to providing innovative solutions to your challenges and to developing breakthrough products.

Asphalt Concrete Mix Considerations

Asphalt concrete (AC) mix varies by country and by region. GlasGrid has been designed for use with conventional hot asphalt mixes that are placed with proper compaction to at least 97% of bulk relative density or at least 93% of maximum relative density. AC must meet the local surface course hot mix specification for heavy traffic (high AADT) conditions, with sufficient stability and durability to carry traffic loadings and withstand temperature changes. The AC mix must be designed according to: a) Marshall method (Asphalt Institute Manual MS2), to achieve stability of at least 8000 Newtons (1800 lbs); or, b) Superpave method (Asphalt Institute Manual SP2) for surface course hot mix asphalt subject to heavy traffic conditions, incorporating aggregates and asphalt cement. When using any specialized mixes or additives in AC mixes with GlasGrid, please contact Saint-Gobain ADFORS for detailed technical guidance.

Learn more about how GlasGrid Pavement Reinforcement System products can increase the life of your paving projects.

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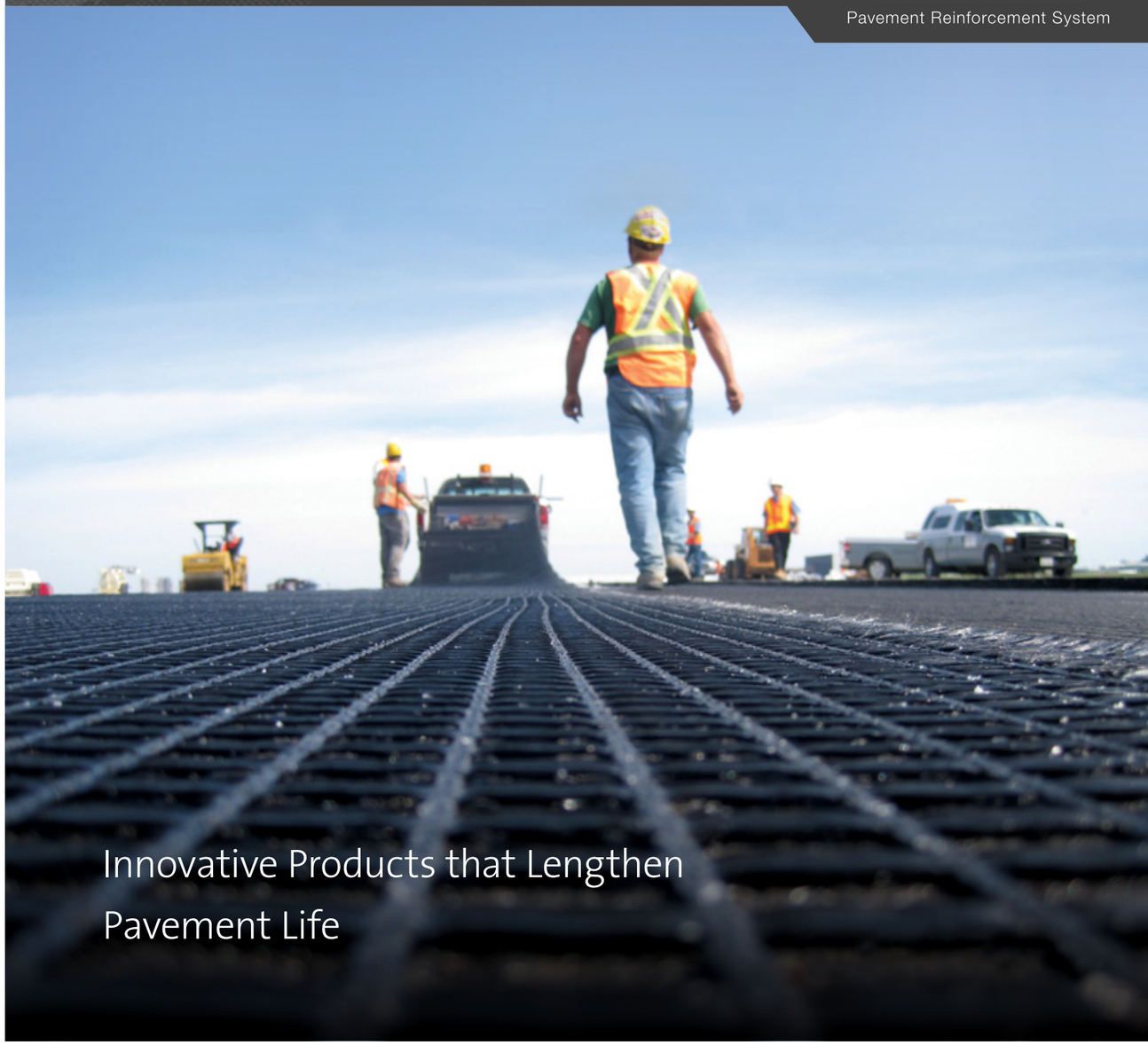
GlasGrid® Pavement Reinforcement System

GLASGRID®
Pavement Reinforcement System



Innovative Products that Lengthen Pavement Life

Stronger ideas for a sustainable world

ADFORS
SAINT-GOBAIN

Save money – and extend pavement life by up to 300% – with GlasGrid.®

GLASGRID® GG50

Complete Road Reinforcement System

- Full width reinforcement of roadways
- Tensile strength – 50 kN/m x 50 kN/m (280 lb/in x 280 lb/in)
- Grid size – 25 mm x 25 mm (1" x 1") per mix gradation

GLASGRID® GG100

Complete Road Reinforcement System

- Full width reinforcement of roadways
- Tensile strength – 100 kN/m x 100 kN/m (560 lb/in x 560 lb/in)
- GG8501 grid size – 12,5 mm x 12,5 mm (1/2" x 1/2") per mix gradation
- GG8511 grid size – 25 mm x 25 mm (1" x 1") per mix gradation

GLASGRID® GG200

Detail Repair System

- Precision reinforcement for construction joints, concrete joints and major intermittent transverse cracks
- Tensile strength – 100 kN/m x 200 kN/m (560 lb/in x 1120 lb/in)
- GG8502 grid size – 12,5 mm x 12,5 mm (1/2" x 1/2") per mix gradation
- GG8512 grid size – 25 mm x 25 mm (1" x 1") per mix gradation

Custom Products
We can also supply customized reinforcement products to meet your unique specifications such as CG50, CG100, CG200, GP25, GP50 and TF100.

GlasGrid is millable and recyclable with standard paving recycling methods.

Typically, pavement cracking is caused by traffic loading, age hardening and temperature cycling. GlasGrid® Paving Reinforcement combines strength and elasticity for long-lasting performance and helps arrest this cycle of deterioration. It's the hidden strength in the road, reducing reflective cracking for years to come.

GlasGrid works by reinforcing asphalt concrete overlays in pavement construction. The fiberglass grid is "sandwiched" between the leveling and surface courses of asphalt, and is designed to turn crack stresses horizontally and dissipate the stress. GlasGrid helps retard cracking from reflecting through a new asphalt overlay to the surface.

GlasGrid retards reflective cracking

Features and Benefits of GlasGrid

- Lowers maintenance costs
- Repairs severely cracked roads and postpones complete reconstruction
- Dramatically extends the life of roads, runways and parking lots
- Open aperture design promotes aggregate interlock between paving courses, greatly decreasing shear potential that is common with paving fabrics
- High stiffness, high modulus of elasticity, low elongation
- Effective bonding of grid during installation to leveling course with patented adhesive backing (standard practice of use of tack coat is recommended to enhance or promote bonding between lifts of ACC layers)
- Ease of constructability allows for GlasGrid installation and immediate placement of overlying pavement

Engineered for Performance

- Superb product engineering in the configuration of fiberglass strands
- The combination of high tensile strength and high modulus of elasticity at low elongation makes GlasGrid, pound for pound, stronger than steel

Tested in the Lab, Proven in the Field

- In independent lab tests, GlasGrid has been proven to extend pavement life by up to 300%
- Shown to reduce both thermal and stress-related reflective cracking
- Tens of thousands of successful installations worldwide
- Case studies show positive results in the field as reported by road and airport engineers from around the world

Results from the field: GlasGrid lowers maintenance costs

GlasGrid Successfully Passes Rigorous Analysis

The trunk road of the A45 in Billing, United Kingdom, consisted of a PCC pavement overlaid with a thin lift of asphalt. Reflective cracking was adversely affecting PCC joints. If a conventional approach of a thick asphalt overlay was used, there would be lengthy road closures and massive traffic disruption. Pavement analysis results from a falling weight deflectometer test, a 3-D Finite Element Model and ARCDESO software indicated that a GlasGrid and a polymer-modified asphalt option would be viable.

Utilized in Turnpike Widening

The Ohio Turnpike is a 241-mile highway that spans the state of Ohio. The Turnpike Authority has used GlasGrid in a variety of applications during its $600 million Third Lane Expansion Project. This project included the addition of 320 lane miles of new pavement. Successful applications of GlasGrid 8502 include its placement over longitudinal joints, full width shoulder reinforcement and joint reinforcement in realignment areas.

Top Choice at International Airport

Hotel Taxiway's original pavement structure involved 6-meter jointed PCC slabs in a composite pavement with an asphalt wearing course. To reduce maintenance issues involving concrete joints reflecting through the asphalt, GlasGrid has been incorporated into the rehabilitation at the busiest taxiway at the Toronto Pearson International Airport. The Greater Toronto Airport Authority monitored the GlasGrid section's performance against a control section and found that GlasGrid delivered superior, long-lasting performance.

A Fast, Effective Solution for Busy Roads

Extensive longitudinal and transverse cracking caused by an extremely rigid stabilized sub-base was causing problems on Hume Highway and other roads in Wagga Wagga, Australia. These heavily trafficked roads, one reaching the 20,000 Annual Average Daily Traffic (AADT) level, were having significant issues with thermal and fatigue cracking. GlasGrid 8501 self-adhesive reinforcement grid, chosen for its high modulus, tensile strength and low elongation properties, was applied with minimum traffic disruption.

"My research has proven that GlasGrid is worth every penny of its initial installed cost by extending pavement life compared with other pavement fabrics that I have used over that same period of time. Its tensile strength far exceeds other products on the market."

— David W. Clarke, P.E.
Senior Project Manager
HNTB Corporation

It's Simple to Install

1. Prepare the Surface

- Complete all crack sealing, pothole filling, base repairs, leveling course applications, etc.
- Surface must be dry, clean and dust-free.
- The road surface temperature **must** be between 5°C* (40°F**) and 60°C (140°F). On asphalt surfaces less than 24 hours old, the surface temperature **must** be between 5°C (40°F) and 46°C (110°F). Local guidelines should be followed for paving temperature range.

2. Install GlasGrid

- Load roll onto front of tractor. Always load the red colored end of the core on the right side of the installation vehicle to allow placement of the mesh with the self-adhesive side down.
- Roll **only** with rubber-tired roller to activate adhesive. Roller **must** be kept clean.
- Apply tack coat per project requirements and pave once fully cured.

NOTE: GlasGrid can also be installed manually.

3. Pave

- The surface course of asphalt can be placed immediately after GlasGrid is installed. There are no disruptions or delays to normal paving operations.
- Minimum 75-150 mm (3-6") overlap is required at end of roll joints. Minimum 25-50 mm (1-2") overlap is required for longitudinal joints.

NOTE: For complete installation directions, please consult your Saint-Gobain ADFORS representative.

*All metric values are nominal. **All imperial values are approximate.