



Pavement
reinforcement system
GlasGrid®

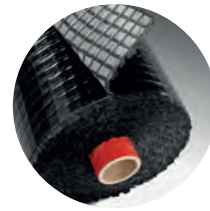


Product Range

ADFORS GlasGrid product line offers several styles of pavement reinforcement grids designed to reinforce asphalt concrete overlays. They retard reflective cracking by a factor of 2 to 3 times by turning stresses horizontally in order to dissipate them. The grid configuration features fiberglass strands coated with an elastomeric polymer. Each strand has a remarkably high tensile strength, as well as a high modulus of elasticity at low elongation – making ADFORS GlasGrid stronger than steel by weight.



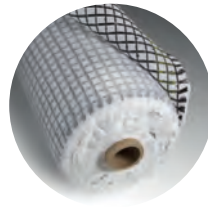
GlasGrid GG



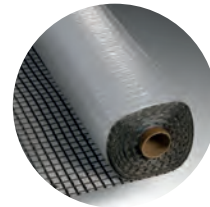
GlasGrid TF



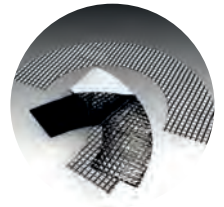
GlasGrid CG



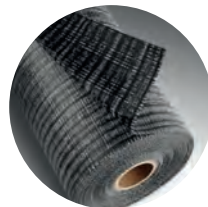
GlasGrid CGL



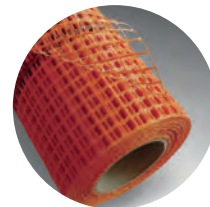
GlasGrid PG



GlasGrid PM



GlasGrid GP



GlasGrid IM

		GG	TF	CG	CGL	PG	PM	GP	IM
Classification EN 15381 ¹	Flat surface/ Leveling course	R	R	R/STR/B	R/STR	R/STR/B	R/STR/B	R/STR/B	R
	Milled surface	-	-	R/STR/B	R/STR	R/STR/B	R/STR/B	R/STR/B	-

Characteristics	Self-adhesive	•	•			•	•		•
	Non-woven fabric layer			•	•	•	•	•	
	Bitumen layer					•	•		
	Tack Film ²		•						

¹ Function classification in accordance with EN 15381

² Tack Film = the film is designed to replace a need for the tack coat in the interlayer.

R = reinforcement | STR = stress relief | B = interlayer barrier

The Hidden Strength in the Runway

Lower lifecycle costs of airfield asphalt overlays by up to 20-30 %

Centralia Airport, Exeter, Ontario, Canada →



State of the pavement before the repair in 1992 – safety compromised



State of the pavement after 20 years in service (photo May 2012)

Heathrow International Airport London, UK

Project: Pink Elephant Car Park
Product: ADFORS GlasGrid GG50
Quantity: 45,000 m²
Installation date: June 2005

Overlay design:

40 mm surface course
ADFORS GlasGrid GG 50 + fixing coat
30 mm leveling course
Existing PCC panels

Project details:

At Heathrow Airport in London, the PCC pavement of an existing taxiway needed to be converted into an asphalt paved parking lot. The budget was tight, but the client wanted to prevent reflective cracking to maintain the visual conditions and prevent the detrimental effect of moisture ingress in the structure. Using ADFORS GlasGrid and a fixing coat of Sealoflex® polymer modified bitumen, a limited overlay thickness was provided. Inspection of the project in 2009 showed that this solution was very effective in addressing reflective cracking, as only one crack had reflected.



Atatürk International Airport Istanbul, Turkey

Project: Atatürk International Airport Runway Rehabilitation
Product: ADFORS GlasGrid GG100
Quantity: 300,000 m²
Installation date: May 2010

Overlay design:

4 cm SMA-19 mm nominal
6 cm HMA-19 mm nominal
6 cm HMA-19 mm nominal
ADFORS GlasGrid GG100
10 cm CRL-19 mm nominal

Project details:

A major overall reinforcement and expansion of the runway, which included significant volumes of fill to correct the pavement profile, needed to be completed. The old PCC was removed and reinstated with ADFORS GlasGrid reinforced ACC. The result was a longer and wider runway that has the ability to handle heavier aircraft loadings.



Tested in the lab, proven in the field

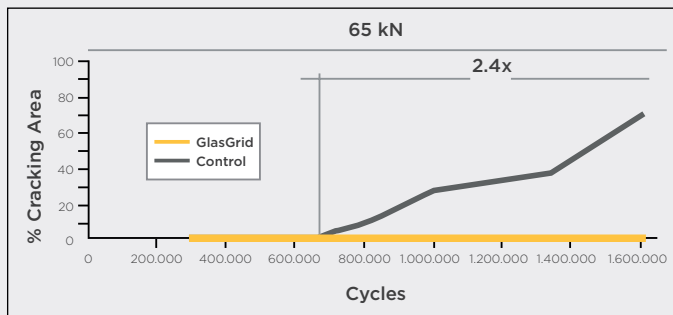
IFSTTAR full scale tests on ADFORS GlasGrid reinforced flexible pavements



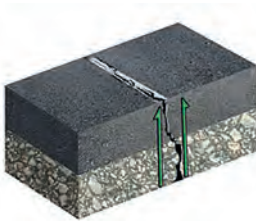
The objective of this research was to evaluate the effect of the reinforcement by a fiberglass grid ADFORS GlasGrid GG100 – 100 kN/m on the performance of a new flexible pavement, with

a relatively thin bituminous wearing course (80 mm). For that purpose, one reinforced pavement section, and one reference section, without reinforcement, have been tested on the IFSTTAR accelerated pavement testing facility. They were submitted to a traffic consisting of 1 million dual wheel 65 kN load cycles (representing the French standard axle load), and then 200 000 additional cycles, with loads increased to 70 kN. The conclusions of the study indicate a very positive effect of the fibreglass grid on the resistance to cracking of flexible pavements:

- Cracking appeared first on section without grid after 800 000 cycles. At the end, 70% of the section was cracked.
- Section with grid presents no cracking until the end of the test (1,2 M cycles).

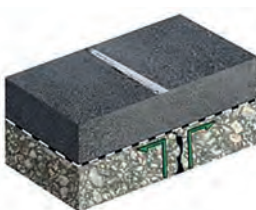


ADFORS GlasGrid turns crack stresses horizontally and dissipates the stress.



Without ADFORS GlasGrid®

Stress travels uninterrupted, causing cracks



With ADFORS GlasGrid®

Stress is redirected horizontally and is dissipated, minimizing cracks

Milling Performance and Recyclability – RWTH Aachen University



In this test, ADFORS GlasGrid GG200 – 200 kN/m was installed on an existing binder course AC 16 B S and covered with 4cm thick top layer SMA 8 S. The upper part of the binder course including the reinforcement grid were

picked up by the milling machine in a single step. No adverse effects were realized and milling depth was not affected. A second test, the Cycling Tension test, concluded that the partial reuse of milled asphalt granulate (including glass fibers) in a new asphalt mixture improved the fatigue behaviour of the recycled asphalt.

The Advantages for You

- High-modulus and tensile fiberglass grid due to consistent impregnation of each glass filament
- Patented polymer coating improving compatibility with bitumen
- Made from mineral raw materials
- Excellent layers' bonding
- Quick and efficient installation
- Good trafficability
- Easy cutting
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)
- Edge marking for easy overlapping
- Thermal and chemical stability
- Various strengths available 25–200 kN/m

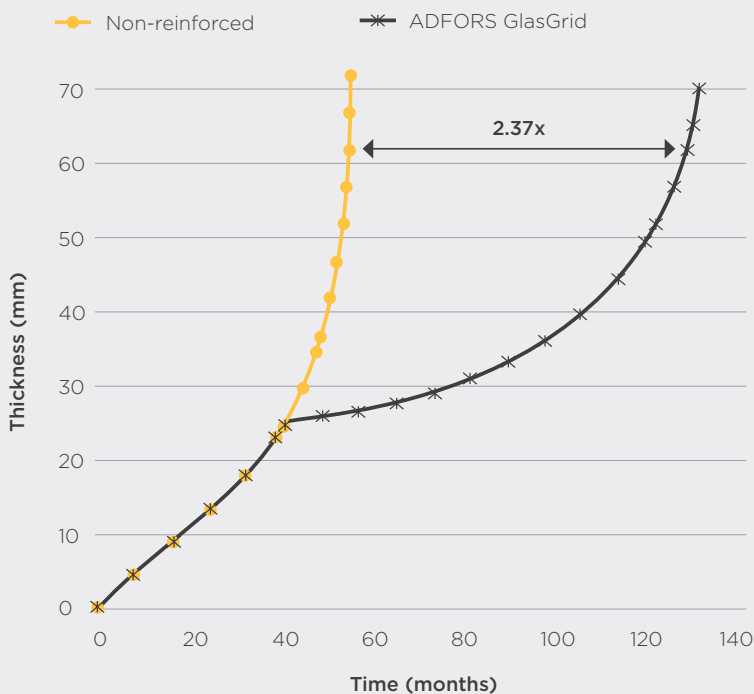
Based on 25+ years of successful installations around the world, ADFORS GlasGrid extends pavement life up to 300% and typically provides a 50% reduction in future investment cost (e.g. maintenance, rehabilitation and use costs) over the life of an average road.

How it works:

Fill out the Design Worksheet with information about your project. Our engineers will input the data into PaveLife and ADFORS will show you how ADFORS GlasGrid can increase the life of your overlay.



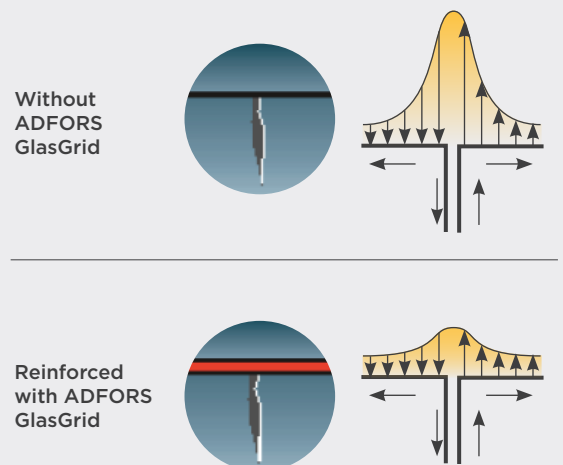
PaveLife Outputs An Analysis for your specific project that shows the quantifiable benefit of using ADFORS GlasGrid.



The only tool of its kind on the market.

PaveLife is an advanced software tool designed to predict the reflective crack growth rate of an asphalt pavement after rehabilitation. The software tool illustrates the relative change in life due to both thermal and traffic loading of the pavement when using ADFORS GlasGrid interlayer systems compared to no reinforcement.

Stress and strain distribution over ADFORS GlasGrid reinforcement system



Saint-Gobain ADFORS

World-class capabilities. Worldwide reach.

ADFORS 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.

Final Consideration

The installation of any asphalt reinforcement interlayer shall follow the local regulations for asphalt road construction. If you have any questions or unique installation parameters, do not hesitate to contact us.

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

glasgrid.eu@saint-gobain.com
www.glasgrid.com/eu



SAINT-GOBAIN ADFORS CZ s.r.o.

Sokolovská 106
570 21 Litomyšl • Czech Republic
Tel. : +420 461 651 111, +420 461 651 231
Fax : +420 461 651 231
glasgrid.eu@saint-gobain.com
www.adfors.com

ADFORS GlasGrid® is manufactured at an ISO 9001:2008 registered facility of Saint-Gobain ADFORS. ADFORS GlasGrid® is a registered trademark of SAINT-GOBAIN ADFORS. U.S. Patent 8,038,364; 8,349,431 and 8.882.385. Additional patents pending.

© 2018 SAINT-GOBAIN ADFORS

 1021-CPR-040/15-1
2015

 0799-123
2012