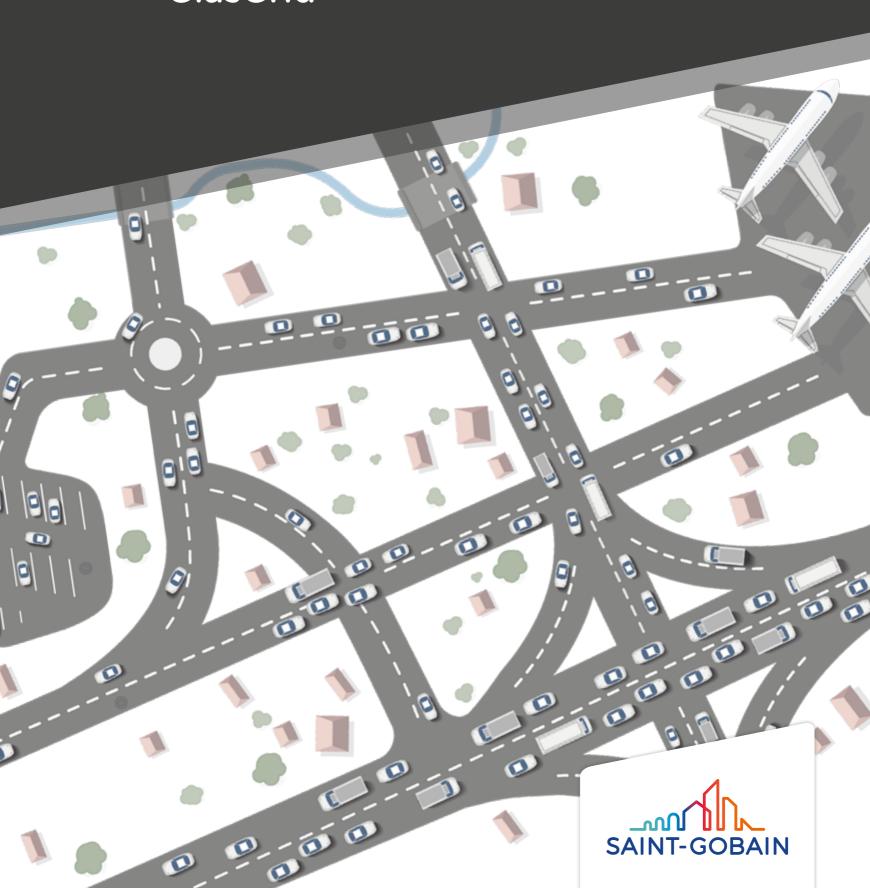
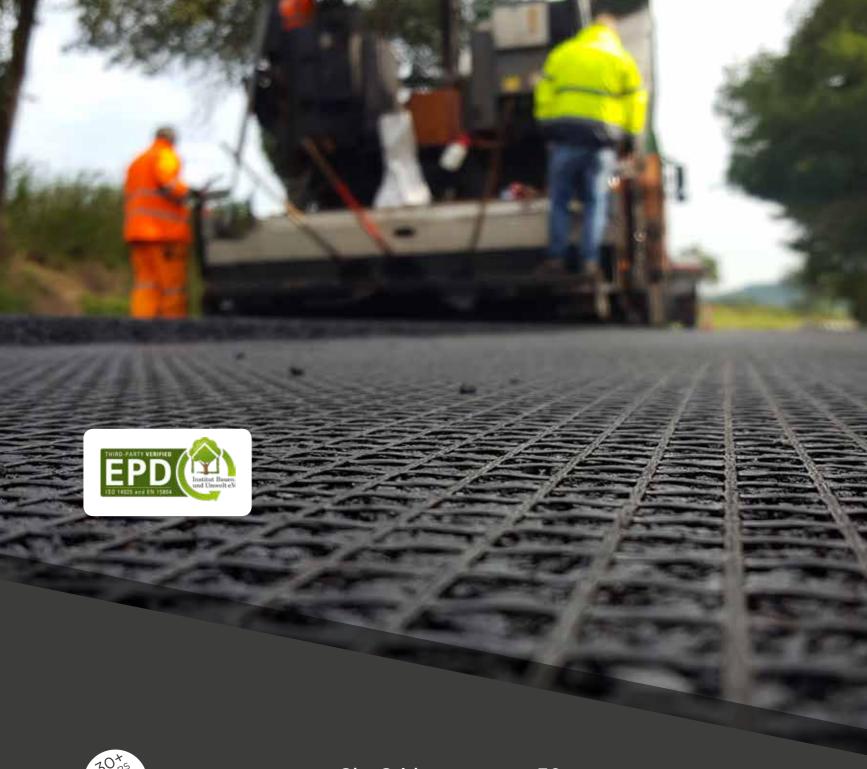


# Pavement reinforcement system GlasGrid®







ADFORS produces **GlasGrid** for more then **30 years** 



ADFORS GlasGrid saves money and extends pavement life up to 300 %



ADFORS offers customer service and support in **7 languages** & flexible **delivery worldwide** 

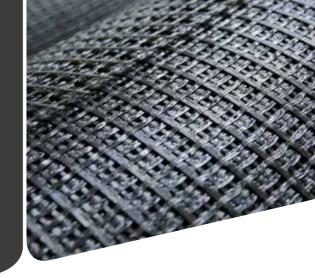


ADFORS GlasGrid provides easy and fast installation up to  $6\ 000\ m^2$  / hour with dedicated installation tractor

#### **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.









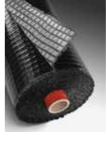














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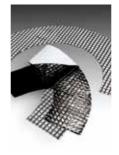


GlasGrid TF

GlasGrid CG











GlasGrid CGL

GlasGrid PG

GlasGrid PM

GlasGrid GP

GlasGrid IM

		GG	TF	CG	CGL	PG	PM	GP	IM
Classification EN 15381	Flat surface/ Leveling course	R	R	R/STR/B	R/STR	R/STR/B	R/STR/B	R/STR/B	-
	Milled surface	-	-	R/STR/B	R/STR	R/STR/B	R/STR/B	R/STR/B	-
	Self-adhesive	<b>✓</b>	<b>✓</b>			<b>✓</b>	<b>✓</b>		<b>✓</b>
Characteristics	Non-woven fabric layer			<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	
Characteristics	Bitumen layer					<b>✓</b>	<b>✓</b>		
	Tack Film *2		<b>✓</b>						

 $<sup>^{\</sup>ast 1}$  Function classification in accordance with EN 15381.

<sup>\*2</sup> Tack Film = the film is designed to replace a need for the tack coat in the interlayer.

#### The key 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 30 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.

ADFORS GlasGrid turns crack stresses horizontally and dissipates the stress.



Without ADFORS GlasGrid®





With ADFORS GlasGrid

Stress is redirected horizontally and is dissipated, minimizing cracks

## 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).

#### 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 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 m<sup>2</sup>

Installation date: June 2005

#### Overlay design:

40 mm surface course ADFORS GlasGrid GG50 + 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 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 m<sup>2</sup> **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 GlasGrid reinforced ACC. The result was a longer and wider runway that has the ability to handle heavier aircraft loadings.







### GlasGrid® **GG**

Technical Data Sheet

1/2

#### **General Description**

ADFORS GlasGrid GG Full Lane Width Pavement Reinforcement System is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid is a high strength, open fiberglass grid custom knitted in a stable construction and coated with a patented elastomeric polymer and self-adhesive glue. Every component of the matrix shall be stabilized against ultraviolet degradation and inert to chemicals normally found in a natural soil environment. ADFORS GlasGrid conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

### Technical Characteristics

Property	Unit	GG 50	GG 100	GG 200	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(55 x 55) - 5	(115 x 115) - 15	(115 x 215) - 15	EN ISO 10319
Tensile Elongation Ultimate	%	2,5 ± 0,5	2,5 ± 0,5	2,5 ± 0,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(46 x 46) ± 10	(95 x 95) ± 20	(95 x 180) ± 20	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(2.200 x 2.200) ± 200	(4.600 x 4.600) ± 600	(4.600 x 8.600) ± 600	EN ISO 10319
Young's Modulus E	MPa	73.000	73.000	73.000	
Mass per Unit Area	g/m²	205	405	603	EN ISO 9864
Melting Point Coating	°C	>232	>232	>232	ASTM D 276
Roll Length	m	150	100	70	
Roll Width	m	1,0; 1,5; 2,0; 3,0	1,0; 1,5; 2,0; 3,0	1,5; 3,0	
Roll Area	m²	150, 225, 300, 450	100, 150, 200, 300	105, 210	
Adhesive Backing		Pressure sensitive	Pressure sensitive	Pressure sensitive	<u> </u>
Grid Size (Center to Center of Strand)	mm	25 x 25	12,5 x 12,5 (type 8501) 25 x 25 (type 8511)	25 x 19	
Material	Fiberglass rei	nforcement with modifi	ed polymer coating and	pressure-sensitive a	adhesive backing.

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Low elongation
- Thermal and chemical stability
- Excellent milling performance







- Complete all crack sealing, pothole filling, base repairs, leveling course application. Road surface must be dry, clean and dust-free with temperature 5 °C - 60 °C.
- Unroll the geogrid with the sticky side face down on the flat layer/leveling course.
- Respect the overlap of end roll joints 10 15 cm and longitudinal joints at minimum
- Press the grid to the layer to activate glue and ensure bonding between the lower surface and grid.
- Apply tack coat per project requirements. (See application tack coat rate formula in Installation manual page 4).
- Permit the tack to completely cure prior to proceeding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website or watch the video on YOUTUBE ADFORS TV channel.

#### **Benefits**

- Quick and efficient installation due to self-adhesive backing
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)



#### **Palletization**

Product	Roll width	Roll area	Roll weight	Core inner diameter	No of rolls on pallet	Total area
	1 m	150 m²	35 kg	76 mm	12	1800 m <sup>2</sup>
	1,5 m	225 m <sup>2</sup>	51 kg	76 mm	12	2 700 m <sup>2</sup>
GG 50	2 m	300 m <sup>2</sup>	69 kg	76 mm	6	1 800 m <sup>2</sup>
00 00	2 m	300 m <sup>2</sup>	69 kg	76 mm	10	3 000 m <sup>2</sup>
	3 m	450 m <sup>2</sup>	104 kg	100 mm	6	2 700 m <sup>2</sup>
	3 m	450 m²	104 kg	100 mm	10	4 500 m <sup>2</sup>
	1 m	100 m <sup>2</sup>	45 kg	76 mm	12	1 200 m <sup>2</sup>
	1,5 m	150 m²	67 kg	76 mm	12	1800 m <sup>2</sup>
GG 100	2 m	200m²	90 kg	76 mm	6	1 200 m <sup>2</sup>
00 100	2 m	200 m <sup>2</sup>	90 kg	76 mm	10	$2~000~m^2$
	3 m	$300 \text{ m}^2$	135 kg	100 mm	6	1800 m <sup>2</sup>
	3 m	300 m <sup>2</sup>	135 kg	100 mm	10	3 000 m <sup>2</sup>
GG 200	) 1,5 m	105 m²	69 kg	76 mm	12	1 260 m <sup>2</sup>
	3 m	210 m²	140 kg	100 mm	6	1 260 m <sup>2</sup>
	3 m	210 m <sup>2</sup>	140 kg	100 mm	10	2 100 m <sup>2</sup>



In as much as Saint-Gobain ADFORS has no control over installation design, installation workmanship, accessory materials, or conditions of application, Saint-Gobain ADFORS does not warrant the performance or results of any installation or use of ADFORS GlasGrid GG. This warranty disclaimer includes all implied warranties, statutory or otherwise, including the warranty of merchantability and of fitness for a particular purpose. The purchaser and/or user should perform its own tests to determine the suitability and fitness of the product for the particular purpose desired in any given situation.



Plant Litomysl (CZ): 1021-CPR-040/15-1



# GlasGrid® GG non-adhesive

Technical Data Sheet

1/2

#### **General Description**

ADFORS GlasGrid GG non-adhesive is the product for special application on surfaces covered by mastic asphalt. The product is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid is a high strength, open fiberglass grid custom knitted in a stable construction and coated with a patented elastomeric polymer. Every component of the matrix shall be stabilized against ultraviolet degradation and inert to chemicals normally found in a natural soil environment. ADFORS GlasGrid conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Low elongation
- Thermal and chemical stability
- Excellent milling performance

#### **Technical Characteristics**

Property	Unit	GG 50 NA	Test Method			
Tensile Strength (MD x XD) Ultimate	kN/m	(55 x 55) - 5	EN ISO 10319			
Tensile Elongation Ultimate	%	2,5 ± 0,5 %	EN ISO 10319			
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(46 x 46) ± 10	EN ISO 10319			
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(2.200 x 2.200) ± 200	EN ISO 10319			
Young's Modulus E	MPa	73.000				
Mass per Unit Area	g/m²	205	EN ISO 9864			
Melting Point Coating	°C	>232	ASTM D 276			
Roll Length	m	150				
Roll Width	m	1,5				
Roll Area	m²	225				
Grid Size (Center to Center of Strand)	mm	25 x 25				
Material	Fiberglass reinforcement with modified polymer coating					





- Unroll and lay the geogrid on dry and clean flat layer/leveling course.
- Respect the overlap of end roll joints 10 15 cm and longitudinal joints at minimum 5 cm.
- Apply mastic asphalt layer min. 4 cm.

#### **Benefits**

- Elimination of flowing of mastic asphalt during the hardening
- Protection against microcracking in mastic asphalt
- Quick and efficient installation
- Easy cutting
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)



Product	Roll width	Roll area	Roll weight	Core inner diameter	No of rolls on pallet	Total area
GG 50 I	<b>VA</b> 1,5 m	225 m²	51 kg	76 mm	12	2 700 m²





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## **GlasGrid®**

Technical Data Sheet

#### **General Description**

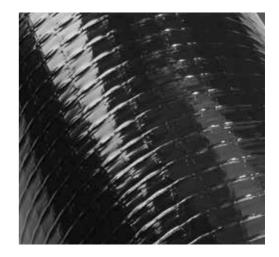
ADFORS GlasGrid TF (Tack Film) Full Lane Width Pavement Reinforcement System is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid TF is a high strength, fiberglass grid custom knitted and coated with a patented elastomeric polymer and self-adhesive glue. The grid is combined with a patented multilayer tack film designed to enhance the bond between layers of asphalt and replace conventional tack coats. Every component of the matrix shall be stabilized against ultraviolet degradation and inert to chemicals normally found in a natural soil environment. ADFORS GlasGrid TF conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Low elongation
- Thermal and chemical stability
- Excellent milling performance
- Patented tack film replacing tack coat

#### **Technical Characteristics**

Property	Unit	TF 100	TF 200	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(115 x 115) - 15	(115 x 215) - 15	EN ISO 10319
Tensile Elongation Ultimate	%	2,5 ± 0,5	2,5 ± 1,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(95 x 95) ± 20	(95 x 180) ± 20	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(4.600 x 4.600) ± 600	(4.600 x 8.600) ± 600	EN ISO 10319
Young's Modulus E	MPa	73.000	73.000	
Mass per Unit Area	g/m²	467	691	EN ISO 9864
Melting Point	°C	>232	>232	ASTM D 276
Roll Length	m	100	60	
Roll Width	m	1,5	1,5; 2,0	
Roll Area	m²	150	90, 120	
Adhesive Backing		Pressure sensitive	Pressure sensitive	
Grid Size (Center to Center of Strand)	mm	12,5 x 12,5 (type 8501) 25 x 25 (type 8511)	25 x 19 mm	
Film Type		100% Polymer	100% Polymer	
Film Softening Point	°C	99	99	
 Material		einforcement with modified po	lymer coating and pressure	-sensitive adhesive backin



bonded to polymer tack film



- Complete all crack sealing, pothole filling, base repairs, leveling course application.
   Road surface must be dry, clean and dust-free with temperature 21 °C 60 °C.
- Unroll the geogrid with the sticky side face down and film up on the flat layer/ leveling course.
- Respect the overlap of end roll joints 10 15 cm and longitudinal joints at 2,5 5 cm.
- Press the grid to the layer to activate glue and ensure bonding between the lower surface and grid.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website or watch the video on YOUTUBE ADFORS TV channel.

#### **Benefits**

- Quick and efficient installation due to self-adhesive backing
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Reduced curing time allows for faster paving construction
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)
- Fewer emissions during installation





#### **Palletization**

Product	Roll width	Roll area	Roll weight		No of rolls on pallet	Total area
TF 100	1,5 m	150 m²	73 kg	76 mm	9	1 350 m²
TF 200	1,5 m 2 m	90 m <sup>2</sup> 120 m <sup>2</sup>	65 kg 87 kg	76 mm 76 mm	9	810 m <sup>2</sup> 1 080 m <sup>2</sup>



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Plant Albion (US): 0799-123 2012



## GlasGrid® **CG**

Technical Data Sheet

#### **General Description**

ADFORS GlasGrid CompoGrid Pavement Reinforcement System and Moisture Barrier System is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. CompoGrid is a composite material consisting of fiberglass reinforcement grid coated in a patented elastomeric polymer, bonded to a non-woven paving geotextile. The non-woven geotextile is a staple fiber, needlepunched and manufactured from fibers that are needled to form a stable network and retain dimensional stability relative to each other. CompoGrid is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils. CompoGrid conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

#### **Technical Characteristics**

Property	Unit	CG 50	CG 100	CG 200	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(55 x 55) - 5	(115 x 115) - 15	(115 x 215) - 15	EN ISO 10319
Tensile Elongation Ultimate	%	2,5 ± 0,5	2,5 ± 0,5	2,5 ± 0,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(46 x 46) ± 10	(95 x 95) ± 20	(95 x 180) ± 20	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(2.200 x 2.200) ± 200	(4.600 x 4.600) ± 600 N/mm	(4.600 x 8.600) ± 600 N/mm	EN ISO 10319
Young's Modulus E	MPa	73.000	73.000	73.000	
Mass per Unit Area	g/m²	335	535	733	EN ISO 9864
Melting Point Coating	°C	>232	>232	>232	ASTM D 276
Roll Length	m	100	70	60	
Roll Width	m	1,0; 1,5; 2,0; 3,0	1,0; 1,5; 2,0; 3,0	1,5	
Roll Area	m²	100, 150 200, 300	70, 105 140, 210	90	
Grid Size (Center to Center of Strand)	mm	25 x 25	25 x 25	25 x 19	

Material Fiberglass reinforcement with modified polymer coating bonded to a non-woven textile specifically engineered for asphalt overlays.

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Low elongation
- Thermal and chemical stability







- CompoGrid can be installed on an old asphalt surface or evenly milled surface. Fill cracks and depressions wider than 6 mm. Road surface must be dry, clean and dust-free with temperature 5 ° - 60 °C.
- Apply tack coat per project requirements. (See application tack coat rate formula in Installation manual page 3).
- Unroll the geogrid with the non-wowen fabric side face down immediately after tack coat spraying. Respect the overlap of end roll joints 10 - 15 cm and longitudinal joints at minimum 5 cm. Ensure sufficient amount of tack is applied at the overlap, in order that both layers of materials become fully saturated.
- Press the grid to a layer to ensure a saturation of bitumen into the fabric.
- Permit the tack to completely cure prior to proceeding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website or watch the video on YOUTUBE ADFORS TV channel.

#### **Benefits**

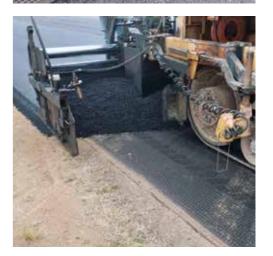
- Universal application on milling surface or over existing pavement surfaces
- Quick and efficient installation
- Efficient moisture barrier due to the non-woven fabrics
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)

#### **Palletization**

Product	Roll width	Roll area	Roll weight	Core inner diameter	No of rolls on pallet	Total area
	1 m	100 m <sup>2</sup>	36 kg	76 mm	12	1 200 m <sup>2</sup>
	1,5 m	150 m²	53 kg	76 mm	12	1 800 m <sup>2</sup>
CG 50	2 m	200 m <sup>2</sup>	72 kg	76 mm	6	1 200 m <sup>2</sup>
00 00	2 m	200 m <sup>2</sup>	72 kg	76 mm	10	2 000 m <sup>2</sup>
	3 m	300 m <sup>2</sup>	108 kg	100 mm	6	1 800 m <sup>2</sup>
	3 m	300 m <sup>2</sup>	108 kg	100 mm	10	3 000 m <sup>2</sup>
	1 m	70 m <sup>2</sup>	40 kg	76 mm	12	840 m²
	1,5 m	105 m²	59 kg	76 mm	12	1 260 m <sup>2</sup>
CG 100	2 m	140 m²	80 kg	76 mm	6	840 m <sup>2</sup>
	2 m	140 m²	80 kg	76 mm	10	1 400 m <sup>2</sup>
	3 m	210 m <sup>2</sup>	120 kg	100 mm	6	1 260 m <sup>2</sup>
	3 m	210 m <sup>2</sup>	120 kg	100 mm	10	2 100 m <sup>2</sup>
CG 200	) 1,5 m	90 m²	72 kg	76 mm	12	1 080 m²







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## GlasGrid® CGL

Technical Data Sheet

### **General Description**

CompoGrid Lite Pavement Reinforcement System and Moisture Barrier System is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. CompoGrid is a composite material consisting of fiberglass reinforcement grid coated in a patented elastomeric polymer, bonded to a non-woven textile. CompoGrid Lite is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils. ADFORS GlasGrid CGL conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

#### **Technical Characteristics**

Property	Unit	CG 50L	CG 100L	CG 200L	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(55 x 55) - 5	(115 x 115) - 15	(115 x 215) - 15	EN ISO 10319
Tensile Elongation Ultimate	%	2,5 ± 0,5	2,5 ± 0,5	2,5 ± 0,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(46 x 46) ± 10	(95 x 95) ± 20	(95 x 180) ± 20	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(2.200 x 2.200) ± 200	(4.600 x 4.600) ± 600	(4.600 x 8.600) ± 600	EN ISO 10319
Young's Modulus E	MPa	73.000	73.000	73.000	
Mass per Unit Area	g/m²	239	439	637	EN ISO 9864
Melting Point Coating	°C	>232	>232	>232	ASTM D 276
Roll Length	m	150	100	70	
Roll Width	m	1,0; 1,5; 2,0; 3,0	1,0; 1,5; 2,0; 3,0	1,0; 1,5; 3,0	
Roll Area	m²	150, 225, 300, 450	100, 150, 200, 300	70, 105, 210	
Grid Size (Center to Center of Strand)	mm	25 x 25	25 x 25	25 x 19	

Fiberglass reinforcement with modified polymer coating and bonded to a non-woven textile specifically engineered for asphalt overlays.

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission.
- Low elongation
- Thermal and chemical stability
- Excellent milling performance





The values and tolerances given are obtained in our laboratories and in accredited testing institutions. The information given in this data sheet is to the best of our knowledge true and correct. However new research and practical experience can make revisions necessary. We reserve the right to make changes at any time. Statements concerning possible use of our product are not intended as recommendations for their use in the infringement of any patent. No patent warranty of any kind, expressed or implied, is made or intended.



Material

- CompoGrid Lite can be installed on an old asphalt surface or evenly milled surface. Fill
  cracks and depressions wider than 6 mm. Road surface must be dry, clean and dust-free
  with temperature 5 ° 60 °C.
- Apply tack coat per project requirements. (See application tack coat rate formula in Installation manual page 3).
- Unroll the geogrid with the non-woven fabric side face down immediately after tack coat spraying. Respect the overlap of end roll joints 10 - 15 cm and longitudinal joints at minimum 5 cm. Ensure sufficient amount of tack is applied at the overlap, in order that both layers of materials become fully saturated.
- Press the grid to a layer to ensure a saturation of bitumen into the fabric.
- Permit the tack to completely cure prior to proceeding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website or watch the video on YOUTUBE ADFORS TV channel.

#### **Benefits**

- Universal application on milled surface or over existing pavement surfaces
- Quick and efficient installation
- Optimum asphalt retention of the nonwoven
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)



Product	Roll width	Roll area	Roll weight	Core inner diameter	No of rolls on pallet	Total area
	1 m	150 m <sup>2</sup>	38 kg	76 mm	12	1 800 m <sup>2</sup>
	1,5 m	225 m <sup>2</sup>	57 kg	76 mm	12	2 700 m <sup>2</sup>
CG 50L	2 m	300 m <sup>2</sup>	77 kg	76 mm	6	1800 m²
CO JOL	2 m	300 m <sup>2</sup>	77 kg	76 mm	10	3 000 m <sup>2</sup>
	3 m	450 m <sup>2</sup>	115 kg	100 mm	6	2 700 m <sup>2</sup>
	3 m	450 m <sup>2</sup>	115 kg	100 mm	10	4 500 m <sup>2</sup>
	1 m	100 m <sup>2</sup>	46 kg	76 mm	12	1 200 m <sup>2</sup>
	1,5 m	150 m²	69 kg	76 mm	12	1800 m²
CG 100L	2 m	200 m <sup>2</sup>	93 kg	76 mm	6	1 200 m <sup>2</sup>
	2 m	200 m <sup>2</sup>	93 kg	76 mm	10	2 000 m <sup>2</sup>
	3 m	300 m <sup>2</sup>	139 kg	100 mm	6	1 800 m <sup>2</sup>
	3 m	300 m <sup>2</sup>	139 kg	100 mm	10	3 000 m <sup>2</sup>
CG 200	1 m	70 m²	47 kg	76 mm	12	840 m²
00 200	1,5 m	105 m <sup>2</sup>	70 kg	76 mm	12	1 260 m <sup>2</sup>
	3 m	210 m <sup>2</sup>	141 kg	100 mm	6	1 260 m <sup>2</sup>
	3 m	210 m <sup>2</sup>	141 kg	100 mm	10	2 100 m <sup>2</sup>







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### GlasGrid® **PG**

Technical Data Sheet

1/2

### **General Description**

The patch repair system ADFORS GlasGrid PG (Patch Grid) is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid PG consists of a high stiffness fiberglass grid coated with a patented polymer coating. The product is specifically developed for the manual repair of small areas and can be installed directly on the milled surface without additional preparation. ADFORS GlasGrid PG conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

#### **Technical Characteristics**

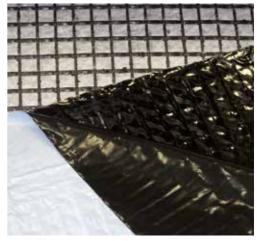
Property	Unit	PG 100	PG 200	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(115 x 115) - 15	(115 x 215) - 15	EN ISO 10319
Tensile Elongation Ultimate	%	2,5 ± 0,5	2,5 ± 0,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(95 x 95) ± 20	(95 x 180) ± 20	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(4.600 x 4.600) ± 600	(4.600 x 8.600) ± 600	EN ISO 10319
Young's Modulus E	MPa	73.000	73.000	
Mass per Unit Area	g/m²	1.450 ± 150	1.830	EN ISO 9864
Melting Point Coating	°C	>232	>232	ASTM D 276
Roll Length	m	20	20	
Roll Width	m	1	1,2	
Roll Area	m²	20	24	
Grid Size (Center to Center of Strand)	mm	25 x 25	25 x 19	

Fiberglass reinforcement with modified polymer coating and bonded to a self-adhesive bitumen layer specifically engineered for asphalt overlays.

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Self-adhesive bitumen layer
- Low elongation
- Thermal and chemical stability
- Excellent milling performance





The values and tolerances given are obtained in our laboratories and in accredited testing institutions. The information given in this data sheet is to the best of our knowledge true and correct. However new research and practical experience can make revisions necessary. We reserve the right to make changes at any time. Statements concerning possible use of our product are not intended as recommendations for their use in the infringement of any patent. No patent warranty of any kind, expressed or implied, is made or intended.



Material

- Patch Grid can be installed on an old asphalt surface or evenly milled surface without additional preparation. Road surface must be dry, clean and dust-free with temperature 5 ° - 60 °C.
- Unroll the geogrid removing the protection film on the back and place the geogrid non-woven fabric side face up. Respect the overlap of end roll joints 10 - 15 cm and longitudinal joints at minimum 5 cm.
- Press the grid to a layer to ensure a bonding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website.

#### **Benefits**

- Universal application on milled surface or over existing pavement surfaces
- Reinforcement of joint superstructures, single cracks and small asphalt areas
- Fast and easy manual installation
- Self-adhesive bitumen layer
- No heating necessary
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)

#### **Palletization**

Product	Roll width	Roll area	Roll weight	No of rolls on pallet	Total area
PG 100	1 m	20 m²	28 kg	12	240 m²
PG 200	1,2 m	24 m²	45 kg	12	288 m²







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### GlasGrid® **PM**

Technical Data Sheet

1/2

#### **General Description**

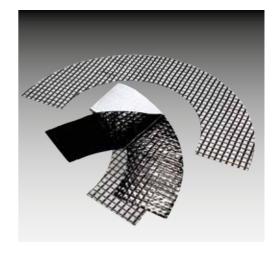
The Manhole Patch Solution ADFORS GlasGrid PM (Patch Manhole) is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid PM consists of a high stiffness fiberglass grid coated with a patented polymer coating. The product is specifically developed for the manual repair around ironwork structures and can be installed directly on the milled surface without additional preparation. ADFORS GlasGrid PM conforms to the property values listed below, which have been derived from quality conformance testing performed by a laboratory:

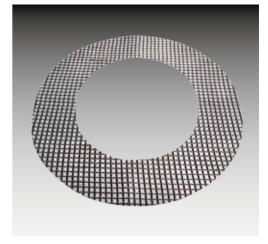
#### **Technical Characteristics**

Property	Unit	PM 100	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(115 x 115) - 15 EN ISO 10319	
Tensile Elongation Ultimate	%	2,5 ± 0,5	EN ISO 10319
Tensile Resistance @ 2% Strain (MD x XD)	kN/m	(95 x 95) ± 20 kN/m	EN ISO 10319
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(4.600 x 4.600) ± 600	EN ISO 10319
Young's Modulus E	MPa	73.000	
Mass per Unit Area	g/m²	1.450 ± 150	EN ISO 9864
Melting Point Coating	°C	>232	ASTM D 276
Grid Size (Center to Center of Strand)	mm	25 x 25	
Internal Diameter	mm	785	
Standard Number of Pieces in Box		5	
Material	Fiberglass reinforcement with modified polymer coating and bonded to a self-adhesive bitumen layer specifically engineered for asphalt overlays.		

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission
- Low elongation
- Thermal and chemical stability
- Excellent milling performance







- Patch Manhole can be installed on an old asphalt surface or evenly milled surface without additional preparation. Road surface must be dry, clean and dust-free with temperature 5 ° - 60 °C.
- Remove the protection film on the back and place the grid non-woven fabric side face up. The overlap of the two halves of the material are necessary (minimum 1 cm).
- Press the grid to a layer to ensure a bonding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website.

#### **Benefits**

- Universal application on milled surface or over existing pavement surfaces
- Crack mitigation around manholes, road gulleys, hydrant caps and slide bars
- Fast and easy manual installation
- Self-adhesive bitumen layer
- No heating necessary
- High grid stiffness providing a wrinkle free installation
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)







Product	Internal Diameter	Number of pieces in box	Box dimensions	Box weight	No of boxes on pallet
PM 100	785 mm	5	60x60x10 cm	5 kg	20



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## GlasGrid® GP

Technical Data Sheet

1/2

#### **General Description**

ADFORS GlasGrid GP (GlasPave<sup>TM</sup>) is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification and meets the requirements of EN 15381. ADFORS GlasGrid GP is constructed of high strength, continuous fiberglass fibers, coated in a patented elastomeric polymer and embedded between two spun bond polyester textiles conforming to the following test methods and physical properties. Every component of the matrix shall be stabilized against ultraviolet degradation and inert to chemicals normally found in a natural soil environment. ADFORS GlasGrid GP conforms to the property values listed below, which have been derived from quality conformance testing performed by a GAI-LAP accredited laboratory:

#### **Technical Characteristics**

Property	Unit	GP 25	GP 50	Test Method
Tensile Strength (MD x XD) Ultimate	kN/m	(30 x 30) - 5	(60 x 60) - 10	ASTM D5035
Tensile Elongation Ultimate	%	3,5 ± 1,5	3,5 ± 1,5	ASTM D5035
Secant Stiffness EA @ 1% Strain (MD x XD)	N/mm	(855 x 855) ± 200	(1.715 x 1.715) ± 430	ASTM D6637
Young's Modulus E	MPa	73.000	73.000	
Mass per Unit Area	g/m²	136	237	ASTM D5261
Asphalt Retention	I/m²	0,47	0,47	ASTM D6140 EN 15381 Annex C
Melting Point	°C	>232	>232	ASTM D 276
Roll Size	m	1,27 × 228,60 1,91 × 228,60 1,91 × 914,40 3,05 × 109,73 3,05 × 548,64 3,81 × 109,73 3,81 × 548,64	1,91 x 109,73 3,05 x 65,84 3,05 x 274,32 3,81 x 65,84 3,81 x 274,32	
Roll Area	m²	290 437 1 747 335 1 673 418 2 090	210 201 837 251 1 045	

GlasPave™ is designed to meet ASTM D7239, "Hybrid Geosynthetic Paving Mat for Highway Applications" Type 1

#### **Properties**

- High grid stiffness provides a wrinklefree installation and a direct load transmission.
- Waterproofing paving mat
- Low elongation
- Thermal and chemical stability
- Excellent milling performance







- GlasPave can be installed on an old asphalt surface or evenly milled surface. Fill cracks and depressions wider than 6 mm. Road surface must be dry, clean and dust-free with temperature 5 ° - 60 °C.
- Apply tack coat per project requirements. The general recommended rate of distribution shall be 0.7 l/m².
- Unroll the geogrid with lighter colored side of fabric down immediately after tack coat spraying. Respect the overlap of end roll joints 10 - 15 cm and longitudinal joints at minimum 5 cm. Ensure sufficient amount of tack is applied at the overlap, in order that both layers of materials become fully saturated.
- Press the grid to a layer to ensure a saturation of bitumen into the fabric.
- Permit the tack to completely cure prior to proceeding.
- Apply asphalt over layer.

See document Installation Procedures for detailed steps available on our website or watch the video on YOUTUBE ADFORS TV channel.

#### **Benefits**

- Strong and effective moisture-resistant membrane
- Universal application on milled surface or over existing pavement surfaces
- Quick and efficient installation
- Lower level of asphalt binder required and smaller project carbon footprint
- High-tensile strength product
- Easy cutting
- Good trafficability (suppliers, trucks, paver)
- Thermal and chemical stability
- Excellent milling performance
- Measured unlimited recyclability & enhanced properties in Reclaimed Asphalt Pavement (RAP)

#### **Palletization**

Product	Roll width	Roll area	Roll weight	Core inner diameter	No of rolls in a pack	Total area
	1,27 m	290 m²	45 kg	102 mm	3	870 m <sup>2</sup>
	1,91 m	437 m²	68 kg	102 mm	3	1 311 m <sup>2</sup>
GP 25	1,91 m	1 747 m²	272 kg	102 mm	3	5 241 m <sup>2</sup>
GP 25	3,05 m	$335 \text{ m}^2$	48 kg	102 mm	3	1 005 m <sup>2</sup>
	3,05 m	1 673 m <sup>2</sup>	238 kg	102 mm	3	5 019 m <sup>2</sup>
	3,81 m	418 m²	68 kg	102 mm	3	1 254 m <sup>2</sup>
	3,81 m	2 090 m <sup>2</sup>	340 kg	102 mm	3	6 270 m <sup>2</sup>
CDFO	1,91 m	210 m <sup>2</sup>	68 kg	102 mm	3	630 m²
GP 50	3,05 m	201 m <sup>2</sup>	54 kg	102 mm	3	602 m <sup>2</sup>
	3,05 m	837 m²	227 kg	102 mm	3	2 511 m <sup>2</sup>
	3,81 m	251 m <sup>2</sup>	68 kg	102 mm	3	753 m <sup>2</sup>
	3,81 m	1 045 m <sup>2</sup>	284 kg	102 mm	3	3 153 m <sup>2</sup>







In as much as Saint-Gobain ADFORS has no control over installation design, installation workmanship, accessory materials, or conditions of application, Saint-Gobain ADFORS does not warrant the performance or results of any installation or use of ADFORS GlasGrid GP. This warranty disclaimer includes all implied warranties, statutory or otherwise, including the warranty of merchantability and of fitness for a particular purpose. The purchaser and/or user should perform its own tests to determine the suitability and fitness of the product for the particular purpose desired in any given situation.



Plant Albion (US): 0799-123



### GlasGrid® **IM**

Technical Data Sheet

1/2

### **General Description**

GlasGrid IM is manufactured at a Saint-Gobain ADFORS facility that has achieved ISO 9001:2015 certification. ADFORS GlasGrid IM is fluorescent orange mesh specifically engineered for protection of sensitive waterproofing membrane against damage during the milling process. ADFORS GlasGrid IM conforms to the property values listed below:

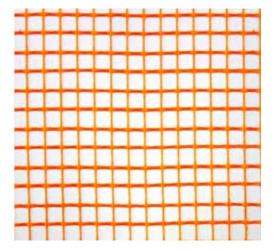
### **Properties**

- High dimensional stability
- Thermal and chemical stability
- Excellent milling performance

#### **Technical Characteristics**

Property	Unit	Metric
Tensile Strength (MD x XD) Ultimate	kN/m	18 x 40
Melting Point	°C	850
Mesh Size	mm	10 x 10
Mass per Unit Area	g/m²	172
Thickness	mm	0,8
Roll Length	m	100
Roll Width m	m	1,1
Roll Area	m²	110
Adhesive Backing		Pressure sensitive
Colour		Fluorescent orange
Material	Fluorescent reinforcing mesh	n with pressure-sensitive adhesive backing.







- Complete all crack sealing, pothole filling, base repairs, leveling course application.
   Road surface must be dry, clean and dust-free with temperature 5 ° 60 °C.
- Unroll the geogrid with the sticky side face down on the flat layer/leveling course.
- Respect the overlap of end roll joints 10 15 cm and longitudinal joints at minimum
   5 cm
- Press the grid to the layer to activate glue and ensure bonding between the lower surface and grid.
- Apply tack coat per project requirements.
- Wait until tack coat will be completely cured.
- Apply asphalt over layer.

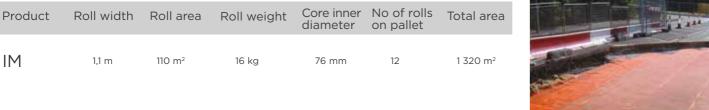
#### **Benefits**

- Quick and efficient installation due to self-adhesive backing
- Easy cutting

**Palletization** 

- Good trafficability (suppliers, trucks, paver)
- Easy visibility during the milling process eliminating the risk of damaging the extremely sensitive waterproofing membrane
- Thermal and chemical stability
- Excellent milling performance
- A cost-effective alternative saving up to 20% when compared to red sand asphalt







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## 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.

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

glasgrid.cz@saint-gobain.com eu.adfors.com

## Save money and extend pavement life up to 300% with ADFORS GlasGrid®.

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

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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.

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