

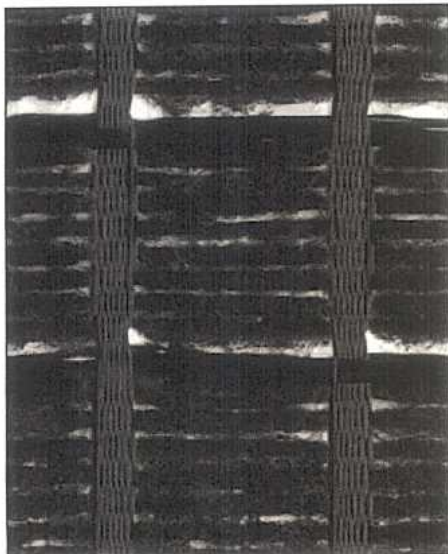
LUCKENHAUS STAR Grid™

PAVING GRIDS FOR ASPHALT OVERLAY

Paving fabrics, with over 20 years of successful applications, have consistently demonstrated an ability to retard reflective cracking and provide a water barrier in asphalt overlays. More recently, however, higher strength geosynthetic materials incorporated into asphalt overlays provide even higher levels of remediation than obtained with paving fabric alone.

LUCKENHAUS STAR Grid™ G-PS and **STAR Grid G+PF** fill the need for an all-inclusive geosynthetic reinforcing element for asphalt pavement overlays. These innovative products, when properly installed in conjunction with an asphalt concrete (AC) overlay, extend the overlay's service life and reduce routine maintenance. Their high-strength, high-modulus structure reinforces the overlay while interrupting reflective crack propagation from the old surface.

STAR Grid G-PS pavement reinforcement grids are based on high strength, flexible woven fiberglass grids. The grid material is factory-coated with a polymer modified bituminous adhesive. **STAR Grid G+PF** is a composite structure consisting of **STAR Grid** reinforcing flexible woven fiberglass grid factory-bonded to a polyester nonwoven paving fabric. While **STAR Grid G-PS** imparts tensile reinforcement to the AC overlay, **STAR Grid G+PF** has the added feature of providing a moisture barrier via its paving fabric/grid composite structure.



STAR Grid G-PS fabrics are bitumen-coated for improved bonding.



APPLICATIONS

- Roadways
- Interchange rehabilitation
- Airport resurfacing
- Parking lots
- Overlaying distressed pavement
- Roadway durability in freeze-thaw areas
- Bridge decks

BENEFITS

- Increased pavement life
- Retards reflective cracking
- Moisture barrier for longer pavement life
- Reduces paving fatigue
- Excellent bonding to the overlay
- Strengthens the asphalt overlay

PRODUCT ADVANTAGES

- High ultimate tensile strengths
- Task-designed products
- Light-weight, easy to handle on jobsite
- Cost-effective
- Wide-width designs

LUCKENHAUS™
Technical Textiles

175 Mehler Lane • Martinsville, VA 24112

Phone: (276) 632-1605
Toll free: (866) 513-6275
Fax: (276) 638-4704

DISCLAIMER: This document is to the best of our knowledge a true and accurate representation of information available. No warranty, express or implied, is made because the conditions in which the product and some information may be used is beyond our control. Luckenhaus Technical Textiles, Inc., assumes no responsibility for the use of information presented in the brochure and disclaims all liabilities which may arise in connection with such use. Suitability of information and suggested uses is the sole responsibility of the user. **Any implied warranty on fitness for a particular purpose is expressly excluded.**

STAR Grid™ G-PS 50 paving grid

LUCKENHAUS STAR Grid™ G-PS paving grid, developed specifically for the reinforcement of asphalt overlays, is manufactured of glass fiber filaments, woven into a stable interlocking grid and coated with a polymer modified bitumen adhesive to improve bonding within the pavement construction. To provide an easy and economical installation with commonly used fabric laydown equipment, the grid is filled with bituminous coated, interlayered glass filling yarns, which bond to the tack coat.

STAR Grid™ G-PS paving grids are:

- High strength, low elongation, no creep geogrids
- Superior lay-flat for easy installation
- Fatigue resistant
- Heat resistant

Physical Properties of STAR Grid™ G-PS 50

PROPERTY	TEST METHOD	METRIC		IMPERIAL	
WEIGHT (Typical)	ASTM D-5261	355	g/m ²	10.5	oz/yd ²
APERTURE SIZE (Grid) (Typical)	Measured	30 (MD) 30 (TD)	mm	1.2 (MD) 1.2 (TD)	in
PERCENT OPEN AREA (Grid only)	COE method	70+	%	70+	%
WIDE WIDTH TENSILE STRENGTH ¹ @ ULTIMATE	ASTM D-4595	50.0 (MD) 50.0 (TD)	kN/m	3699 (MD) 3986 (TD)	lb/ft
ELONGATION AT BREAK (Typical)	ASTM D-4595	2.3 (MD) 2.5 (TD)	%	2.3 (MD) 2.5 (TD)	%
MELTING POINT	ASTM D-276	>218	°C	>425	°F
Roll Dimensions (Max. Width x Length)	—	2.2 x 100	m	7.2 x 328.1	ft
Roll Area	—	220	m ²	263	yd ²
Roll Weight	—	82.3	kg	181	lb

¹ All values stated here are Minimum Average Roll Values and are based on a 95% confidence level.
(MD Machine Direction; TD-Transverse Direction, also called Cross Direction)

STAR Grid™ G-PS 100 paving grid

LUCKENHAUS STAR Grid™ G-PS paving grid, developed specifically for the reinforcement of asphalt overlays, is manufactured of glass fiber filaments, woven into a stable interlocking grid and coated with a polymer modified bitumen adhesive to improve bonding within the pavement construction. To provide an easy and economical installation with commonly used fabric laydown equipment, the grid is filled with bituminous coated, interlayered glass filling yarns, which bond to the tack coat.

STAR Grid™ G-PS paving grids are:

- High strength, low elongation, no creep geogrids
- Superior lay-flat for easy installation
- Fatigue resistant
- Heat resistant

Physical Properties of STAR Grid™ G-PS 100

PROPERTY	TEST METHOD	METRIC		IMPERIAL	
WEIGHT (Typical)	ASTM D-5261	551	g/m ²	16.3	oz/yd ²
APERTURE SIZE (Grid) (Typical)	Measured	30 (MD) 30 (TD)	mm	1.2 (MD) 1.2 (TD)	in
PERCENT OPEN AREA (Grid only)	COE method	70+	%	70+	%
WIDE WIDTH TENSILE STRENGTH ¹ @ ULTIMATE	ASTM D-4595	100 (MD) 100 (TD)	kN/m	6987 (MD) 8220 (TD)	lb/ft
ELONGATION AT BREAK (Typical)	ASTM D-4595	2.1 (MD) 2.2 (TD)	%	2.1 (MD) 2.2 (TD)	%
MELTING POINT	ASTM D-276	>218	°C	>425	°F
Roll Dimensions (Max. Width x Length)	—	2.2 x 50	m	7.2 x 164	ft
Roll Area	—	110	m ²	131.5	yd ²
Roll Weight	—	64.5	kg	142	lb

¹ All values stated here are Minimum Average Roll Values and are based on a 95% confidence level.
(MD Machine Direction; TD-Transverse Direction, also called Cross Direction)

STAR Grid™ G+PF paving grid

LUCKENHAUS STAR Grid™ G+PF paving grid, developed specifically for the reinforcement of asphalt overlays, is manufactured of glass yarns, woven into a stable interlocking grid and coated with a polymer modified bitumen adhesive to improve bonding within the pavement construction. The glass grid is bonded to a polyester nonwoven paving fabric that meets AASHTO-M288 specifications for asphalt overlays.

STAR Grid™ G+PF paving grids are:

- High strength, low elongation, no creep geogrids
- Superior lay-flat for easy installation
- Fatigue resistant
- Heat resistant

Physical Properties of STAR Grid™ G+PF

PROPERTY	TEST METHOD	METRIC		IMPERIAL	
WEIGHT (Typical)	ASTM D-5261	377	g/m ²	11.1	oz/yd ²
APERTURE SIZE (Grid) (Typical)	Measured	30 (MD) 30 (TD)	mm	1.2 (MD) 1.2 (TD)	in
PERCENT OPEN AREA (Grid only)	COE method	70+	%	70+	%
WIDE WIDTH TENSILE STRENGTH ¹ @ ULTIMATE	ASTM D-4595	50 (MD) 50 (TD)	kN/m	3753 (MD) 3740 (TD)	lb/ft
ELONGATION AT BREAK (Typical)	ASTM D-4595	2.1 (MD) 2.2 (TD)	%	2.2 (MD) 2.5 (TD)	%
MELTING POINT	ASTM D-276	>218	°C	>425	°F
Roll Dimensions (Max. Width x Length)	—	2.2 x 100	m	7.2 x 328.1	ft
Roll Area	—	220	m ²	263	yd ²
Roll Weight	—	86.4	kg	190	lb

¹ All values stated here are Minimum Average Roll Values and are based on a 95% confidence level.
(MD Machine Direction; TD-Transverse Direction, also called Cross Direction)