

S&P Carbophalt® G

Bitumen impregnated asphalt reinforcement



A Simpson Strong-Tie® Company

The information in this technical data sheet is valid for the S&P range of products, systems and solutions.
Please note that the information in your country may vary. Visit sp-reinforcement.eu to find your local branch.

DESCRIPTION

S&P Carbophalt® G is an asphalt inlay with reinforcing function (R) according to EN 15381. It is made of bitumen-impregnated, high tensile glass and carbon fibres woven into an adaptable grid. The top side of the grid is sanded and the bottom side is fitted with a thin separating foil.

WHERE TO USE

- Universally applicable for reinforcement and strengthening of new asphalt layers under high loads
- Increase of pavement stiffness and flexural strength
- Reduction of load-induced stress and strain levels
- Significant delay of load-induced damage and reflection cracking
- Increase of fatigue and deformation resistance
- Increase of pavement durability and service life
- Savings in maintenance, resources and emissions

PERFORMANCE FEATURES

- High efficiency and process reliability during installation and overlay
- Excellent layer bonding due to bitumen impregnation and adaptable grid structure
- Bitumen impregnation protects the fibres during paving and compaction
- Effective fibre activation and anchorage of forces by composite bonding
- Easy to mill and recycle at the end of its service life

GENERAL FEATURES



PRODUCT DATA

Designation

S&P Carbophalt® G

Composition

Black, bitumen-impregnated fibre grid

Longitudinal: Glass fibre; Transverse: Carbon fibre

Mesh opening

15 mm x 15 mm

Weight per unit area

Approx. 560 g/m²

Bitumen impregnation rate

≥ 220 g/m²

Delivery form

Roll widths: 0.97 m / 1.50 m / 1.95 m

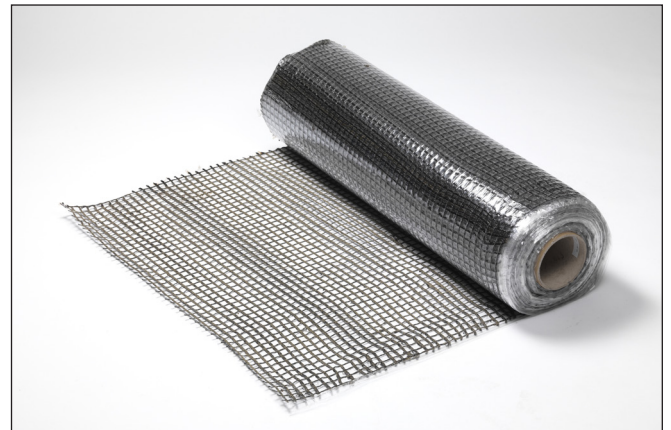
Roll length: 50 m

Storage

Store in original packaging and in a cool, dry and covered area without direct sunlight.

Shelf life

Use within 24 months after manufacture



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TECHNICAL PROPERTIES

S&P Carbophalt® G		Longitudinal	Transverse
Mechanical properties	Unit	Glass fibre	Carbon fibre
E-modulus	N/mm ²	≥ 73 000	≥ 265 000
Elongation ¹	%	3 (±0.3)	1.5 (+0.2)
Tensile strength ¹	kN/m	120	200
Fibre cross section	mm ² /m	46 (51 fibre strands)	46 (52 fibre strands)
CE-marking	According to EN 15381:2008		

¹ASTM D6637-01 adapted to product requirements. Contact S&P for more information.

APPLICATION

Overview

- The detailed installation instructions must be observed. Contact S&P for a free copy.
- Contact your S&P representative for support in implementation and construction planning.

Surface requirements

- S&P Carbophalt® G can be installed on new, milled or existing surfaces.
- Surfaces for installation must comply with the locally valid regulations for the superstructure with asphalt and must be prepared in such a way that the prerequisites for professional installation with the aim of a good layer bond can be met.
- The installation surface must be even and without any breakouts or steps ≥ 1 cm.
- Open cracks with an opening width ≥ 3 mm should be professionally cleaned and grouted with a suitable bituminous compound.

Bitumen emulsion

S&P Carbophalt® G is installed on the broken bitumen emulsion for layer bonding.

- S&P recommends to clean existing and milled surfaces by means of high-pressure washing and vacuuming before applying bitumen emulsion.
- All generally valid quality requirements for the application of bitumen emulsions must be met. A ramp sprayer should be used for application. Manual application of the bitumen emulsion should be avoided.

S&P Recommendation

- Type: C60 (polymer modified) for layer bonding.
- Quantity: According to local regulations / substrate condition for layer bonding.

Consult national standards – S&P asphalt reinforcement does not require additional amounts of bitumen emulsion. For advice, please contact your local S&P branch.

Production installation

- The installation surface must be clean, dry and free of any contaminants that could hinder the adhesion of the asphalt reinforcement grid. The substrate and ambient temperature must be at least 3 °C.
- Grid installation should be carried out by trained professionals using S&P installation machines specially developed for this purpose.
- For installation, the separating foil on the underside of the grid is flamed off and the grid is applied onto the substrate by means of pressure rollers.
- The grid must be installed overlapping at joints. Overlap width in longitudinal and transverse direction ≥ 10 cm. A distance of ≥ 5 cm should be maintained from the pavement edges.
- To ensure sufficient anchoring length, the grid should protrude by approx. 50 cm over the damaged area.
- S&P asphalt reinforcement can be overlaid with asphalt immediately after installation. Asphalt overlay should be carried out within 24 hours at the latest.
- S&P Carbophalt® G must be overlaid with at least 2 cm of asphalt.
- All valid technical regulations for asphalt paving and compaction should be followed.

TESTING & APPROVALS

The effectiveness and sustainability of S&P asphalt reinforcements have been proven in numerous studies and research projects. Contact S&P for more information.

HEALTH & SAFETY

Follow the applicable general regulations for occupational safety and observe the hazard information and safety notes in the material safety data sheets. Safety data sheets are available free of charge from S&P.



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