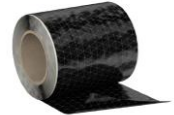
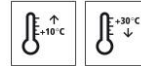


Technical Data Sheet

Sto S&P C Sheet 640

Unidirectional carbon fibre fabric, modulus of elasticity: 640 kN/mm²



Characteristics

- Area of application**
- for reinforcing concrete structures (concrete and reinforced concrete)
 - for bonding onto the surface

- Properties**
- unidirectional carbon fibre fabric
 - high tensile strength
 - follows the geometry of the building element
 - adjusted modulus of elasticity: 640 kN/mm²

- Format**
- width: 300 mm

- Information/notes**
- product for reinforcing structures in accordance with DAfStb directive "Reinforcing concrete members with bonded reinforcement", March 2012
 - not generally building inspectorate approved
 - Special approval is required.

Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Tensile strength	DIN EN 2561	2.600 N/mm ²	Fibre direction
Elongation at break	DIN EN 2561	0,4 %	Fibre direction
Static modulus of elasticity	DIN EN 2561	640 kN/mm ²	Fibre direction

The characteristic values stated are average values or approximate values. Due to the natural raw materials in our products, the stated values can vary slightly in the same delivery batch; this does not affect the suitability of the product for its intended use.

Substrate

- Requirements**
- Requirements on the substrate:
The substrate must be dry, load-bearing, and free from native and foreign release agents.
Remove less strong layers and laitance.

Dry in accordance with the definition of the DAfStb (German) Repair Guideline 2001-10, but depending on the compressive strength class. The moisture content may not exceed 4 CM per cent for concrete qualities up to C30/37 and max. 3 CM per cent for C35/45 concrete, measured with a calcium carbide meter.

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The concrete must be of the compressive strength class C12/15 at least
The bond strength of the concrete substrate should be such that after preparing the bonding area of the concrete, a bond strength of at least of 1.5 N/mm² is achieved.

The concrete cover must be at least 10 mm in the area to be bonded.

The steel must correspond to preparation grade SA 2½ after substrate preparation. Coat steel parts with the approved protection against corrosion StoPox ZNP.

Optimized substrate roughness: 0.5 - 1.0 mm.

Substrate temperature higher than +10 °C and 3 K above dew point.

Preparations

Before bonding the Sto S&P CFK Sheet, check the evenness of the concrete surface. Unevenness > 1 mm per 30 cm must be levelled at least 1 day before bonding.

The edges of the building element must be rounded off to a minimum of 2 cm radius. A radius of approx. 3 cm should preferably be chosen when wrapping columns.

Prepare the substrate using a suitable mechanical process, such as abrasive blasting or high-pressure water blasting (> 800 bar).
Open pores and blow-holes sufficiently.
Prime concrete if required.

Application

Application temperature

Lowest application temperature: +10 °C
Highest application temperature: +30 °C

Mixing ratio

StoPox LH component A : component B = 100.0 : 33.3 parts by weight

Material preparation

Please observe the technical data sheets of the products used.

Consumption

Approx. consumption

1,0 m/m

Material consumption depends on the application, substrate, and consistency, among other factors. The stated consumption values are only to be used as a guide. If required, determine precise consumption values on the basis of the specific project.

Coating build-up

1) Filler and levelling coat for unevenness < 4 mm with StoPox SK 41
filler and levelling coat for unevenness > 4 mm with StoPox KSH thix
plus StoPox Mörtel standfest

Technical Data Sheet

Sto S&P C Sheet 640

2) Application of Sto S&P C-Sheets

Application

Please observe the product-specific technical data sheets

1) Filling and levelling unevenness:

Unevenness < 4 mm can be levelled with StoPox SK 41.

Unevenness of 4 - 30 mm can be levelled with StoPox KSH thix and StoPox Mörtel standfest in several layers.

Consumption: StoPox KSH thix approx. 0.5 - 0.8 kg/m², StoPox Mörtel standfest approx. 1.7 kg/m² per mm layer thickness

2) Application of Sto S&P C-Sheets:

applying the StoPox LH laminating resin

Apply full-faced the homogeneously mixed StoPox LH laminating resin to the substrate with a Moltopren roller.

consumption: approx. 0.8 kg/m² per application cycle

inserting the Sto S&P C-Sheet

After removing the protective film (if present), wrap the Sto S&P C-Sheet with the uncovered side around the support overlapping slightly and fix lightly by hand (wear suitable protective gloves).

Please ensure that the film on the other side of the Sto S&P C-Sheet is also removed during rolling.

The Sto S&P C-Sheet is then saturated with a rubber lip so that it is completely saturated with StoPox resin.

The rubber lip may only be pulled in the direction of the grain.

A further layer of StoPox LH is then applied directly on to the Sto S&P C-Sheet and evenly spread as previously described.

Where overlapping occurs in the grain direction, the minimum overlapping amount is 250 mm.

Avoid vibrations in the vulnerable area of reinforcement for approx. 2 days during the laminating resin's hardening.

checking the reinforcement:

Once the adhesive has hardened, check the sheets for cavities by tapping them.

The evenness of the sheet surface may not deviate across a test stretch of 30 cm by more than 1 mm.

Note:

Avoid damage of any kind to ensure the proper functioning of the Sto S&P C-

Technical Data Sheet

Sto S&P C Sheet 640

Sheet!

For fire protection purposes, please observe that the StoPox LH laminating resin and the Sto S&P C-sheet only have limited temperature resistance.

Cleaning the tools	Clean with StoCryl VV.
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Notes, recommendations, special information, miscellaneous	General application instructions are available at www.stocretec.de and in the notes of the latest Technical Manual.
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Delivery

Article number	Name	Container
14307-006	Sto S&P CFK Sheet 640/400 width: 300 mm	50 m roll
14307-003	Sto S&P CFK Sheet 640/400 width: 300 mm	m

Storage

Storage conditions	Store in dry and frost-free conditions.
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Storage life	In the original container until ... (see packaging).
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Identification

Product group	Carbon fibre composite
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Special notes

The information in this Technical Data Sheet serves to ensure the product's intended use, or its suitability for use, and is based on our findings and experience. Users are nevertheless responsible for establishing the product's suitability and use. Applications not specifically mentioned in this Technical Data Sheet are permissible only after prior consultation. Where no approval is given, such applications are at the user's own risk. This applies in particular when the product is used in combination with other products.

When a new Technical Data Sheet is published, all previous Technical Data Sheets are no longer valid. The latest version is available on the Internet.

Technical Data Sheet

Sto S&P C Sheet 640

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