



A Simpson Strong-Tie® Company

## APPLICATION INSTRUCTIONS



### S&P C-Sheet 640



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## Application instructions



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### REQUIREMENTS

- Minimum pull-off tensile strength of bearing substrate > 1,0 N/mm<sup>2</sup>
- Minimum bearing substrate's temperature 3 °C above dew point temperature
- Maximum substrate moisture content < 4 %
- Glue handling temperature +10 °C to +35 °C
- Substrate temperature min. +8 °C max. +35 °C

### APPLICATION



Preparation of workspace:

Measure out and clearly mark the application area.



Sand blast, shut blast, or grind the substrate using a cup wheel. Not using a chisel!

Cement skin must be completely removed.

The optimum surface roughness is 0,5 to 1,0 mm.



Remove bad concrete (honeycomb), masonry, loose material, wood pieces, insulation material etc.



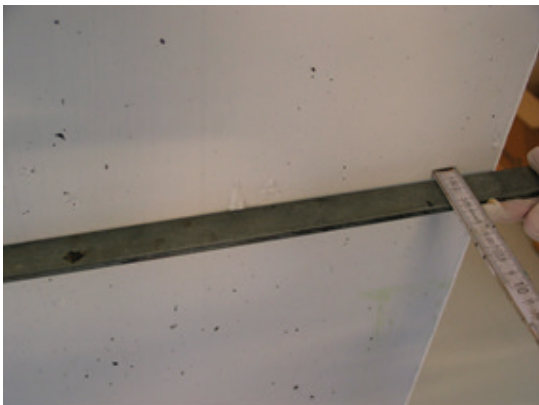
Round off corners and edges within a radius of 25 mm (chamfer or re-profile).



Re-profile using S&P Resin 230 HP levelling mortar.

Pre-treat the derusted reinforcement with S&P Resicem HP.

Cracks > 2 mm must be repaired properly, ensuring a load-transferring connection.



### Quality assurance

Verify evenness:

- Maximum 5 mm across 2 m
- Maximum 1 mm across 30 cm

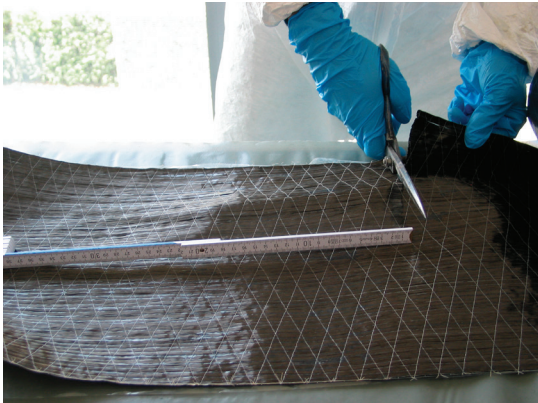
Measure the temperature and the humidity of the substrate. Determine the dew point temperature.



Clean substrate with a vacuum hose.

Substrate must be free of grease and oil.

APPLICATION



Tailor the S&P C-Sheet 640 to size using industrial scissors.

150 mm in fibre direction must be accounted for the anchoring of the S&P C-Sheet 640. Overlapping is not required perpendicularly to the fibre direction.

### Quality assurance

Check sheet type and dimension



Mix S&P Resin 55 HP at a low speed, max. 400 RPM.

Mix using a mixing paddle for approx. 3 minutes.

The glue's ideal temperature while mixing is 15 °C to 25 °C.



Apply S&P Resin 55 HP (vapour proof) onto the substrate.

Distribute evenly with S&P press roller.



Pre-impregnate the S&P C-Sheet 640 with S&P Resin 55 HP. Laminate the mesh in the direction of the fibre by spreading the resin evenly with a rubber spatula (S&P squeeze) and a Teflon press roller.

Roll **only in one direction, longitudinal** to the direction of the fibre.

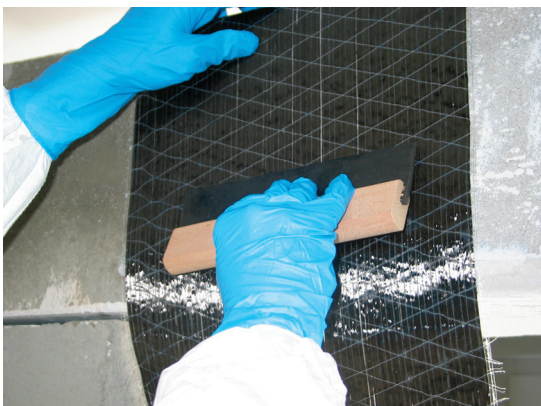
For material consumption rates, see table on pg 6.

APPLICATION



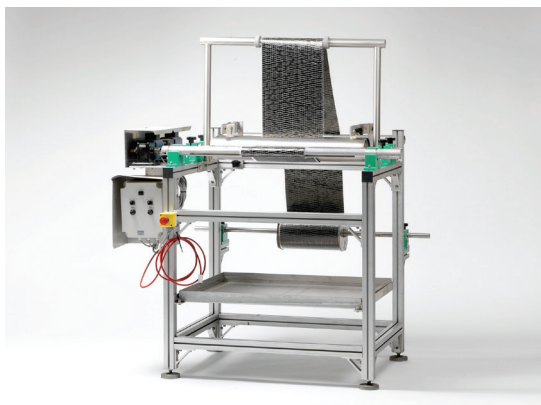
Fix the pre-impregnated S&P C-Sheet 640 onto the substrate.

Make sure that there is overlapping in the fibre direction of at least 150 mm.



Pull the rubber spatula, always in the direction of the fibres, until all fibres are moistened and there are no air pockets left in the sheet.

Clean the tools within the pot life using S&P Cleaner.



In case of larger quantities use S&P wet-lay-up machine for pre-impregnation.



In this stage of work, also cover the sheets' area in quartz sand. This will act as a rough course to ensure the adhesion of plaster or mortar later on.

If covering the area in quartz sand later, in a different work stage, the area must first be primed with a new layer of S&P Resin 55 HP.



Image showing the completed application on a beam.

Full load-bearing capacity is reached after 72 hours, given conditions of 23 °C and 50 % humidity.

In case of exterior application, the system must be protected against UV-radiation.

Fire protection to be added if/as required by the engineer.

### SAFETY

Measures regarding health & safety (protective clothing/ accident prevention) are a prerequisite.

### CONSUMPTION

Estimated glue consumption rates (depending on the substrate roughness) can be found in the following table:

Product	S&P Resin 55 HP (vapour proof)	S&P Resicem HP (improves vapour exchanges)
S&P C-Sheet 640 (400 g/m <sup>2</sup> )	~ 900–1 300 g/m <sup>2</sup>	not recommended
Bonding course	~ 150 g/m <sup>2</sup>	–

More information about the S&P FRP systems and all technical data sheets, as well as all safety data sheets, are available at [www.sp-reinforcement.eu](http://www.sp-reinforcement.eu)

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