

S&P Tecnogrout-FIB

Class R4 repair mortar



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 Tecnogrout-FIB is a high-strength, single-component, fibre-reinforced repair mortar that is formulated with sulphate-resistant cements and meets the requirements of class R4 in accordance with EN 1504-3:2005.

It can be used universally for the structural restoration and repair of concrete components in building construction and civil engineering.

WHERE TO USE

- Repair of concrete components in building construction and civil engineering
- Restoration of structural concrete elements
- Filling of break-outs and holes in concrete floors, ceilings and balcony slabs
- Large-scale surface restoration of concrete components
- Interior and exterior use

PERFORMANCE FEATURES

- Can be applied by hand or wet spraying
- Secure adhesion, also with overhead application
- Excellent workability
- Shrinkage compensated
- Mechanically highly resilient
- Resistant to freeze-thaw and thermal cycles
- Resistant to carbonation
- Low capillary absorption

GENERAL FEATURES

PRODUCT DATA

Generic description

S&P Tecnogrout-FIB

Delivery form

25 kg bags

40 x 25 kg bags per pallet

Storage

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

Shelf life

Use within 12 months after manufacture



S&P Tecnogrout-FIB conforms to EN 1504-3

MECHANICAL PROPERTIES

Property	Test method	Minimum requirement according to EN 1504-3, R4 mortar	Value
Bulk density (powder)	-	-	1.8 kg/dm ³
Hardened density	EN 12190	-	~ 2.25 kg/dm ³
Maximum aggregate size	-	-	2 mm
Water dosage per 25 kg bag	-	-	14-16 % / 3.5-4 litres
Consumption	-	-	~ 20 kg/m ² per cm thickness
Application thickness	-	-	5-30 mm per layer
Pot life	-	-	30 minutes at 20 °C
Hardening time	-	-	~ 2 hours
Application temperature	-	-	5 to 35 °C
Compressive strength	EN 12190	≥ 45 MPa (28 days)	> 25 MPa (1 day)
			> 40 MPa (7 days)
			> 50 MPa (28 days)
Flexural tensile strength	EN 12190	-	> 5.0 MPa (1 day)
			> 7.0 MPa (7 days)
			> 8.0 MPa (28 days)
E-Modulus	EN 13412	≥ 20000 MPa	> 20000 MPa
Water absorption	EN 13057	≤ 0.5 kg/m ² h. ^{0.5}	< 0.5 kg/m ² h. ^{0.5}
Carbonation resistance	EN 13295	d _k < MC(0.45)	Pass
Adhesion to concrete	EN 1542	≥ 2 MPa	> 2 MPa
Bond strength after 50 freeze-thaw cycles	EN 13687-1	≥ 2 MPa	> 2 MPa
Chloride ion content	EN 1015-17	≤ 0.05 %	< 0.05 %

Above test results are carried out at +20 °C and 65 % RH mixing with 15 % water unless otherwise stated.

APPLICATION

Substrate preparation:

Mechanically abrade concrete surface to completely remove debris and loose particles. Wet the surface until complete saturation is achieved and allow standing water to either evaporate or be absorbed into the substrate. Alternatively, remove standing water using a sponge.

Mixing:

Mix the mortar either by hand or in a concrete mixer, adding 14-16 % of water (3.5-4 litres per 25 kg bag). Mix until completely lump-free, ensuring that a homogenous mix is achieved.

Application:

Apply the mortar by means of trowel or spatula, or alternatively pouring the grout onto the concrete substrate. Finish the surface to the required roughness grade. Alternatively if spraying the mortar (gunite), install at a max. thickness of 25 mm per layer. In case a bonding agent is required, it is recommended to consult to our Technical department.

Curing:

Once the mortar is installed, surfaces must be kept damp for at least 24 hours.

TESTING

Please contact us if you require any information regarding tests that have been conducted. Test reports may be available.

CLEANING

Tools and application equipment must be cleaned with water immediately after use. If the product hardens, it can only be removed by mechanical means.

CE MARKING

S&P TecnogROUT-FIB meets the requirements of European Code EN 1504: "Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity - Part 3: Structural and non-structural repair", for grouts CLASS R4.

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.

S&P's range of products are for industrial use. They must be installed by specialised personnel and competent professionals with adequate training. The installation instructions must be followed and can be found in S&P application manuals and several "Guideline" documents / existing technical notes.

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The information and data in this technical data sheet serve to ensure the normal intended use and normal application suitability; the information and data are based on our knowledge and experience. They do not absolve the user from their own responsibility to check the suitability and application method.

The rights to make changes to product specifications are reserved. Furthermore, our general sales and delivery terms apply. The current, most recent product data sheet is valid, and should be requested from us.

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