

## **F9300**

**Properties:**

*F9300* anchoring grout is a ready-to-use dry mixture based on cement, which hardens without shrinkage when mixed with water.

*F9300* is used for force-fitting anchorage of rock bolts in underground and tunnel constructions and for securing of excavations, rocks and slopes. It is suitable for closing of cross joints in reinforced concrete structures and for force-fitting installation of retrofitted connecting reinforcement.

*F9300* is also used as a cement suspension for grouting of the VPRESS injection hose system.

**Technical data:**

Substance data:

Consistency	solid	
Colour	grey	
Odour	odourless	
pH value	11 - 13.5	DIN EN ISO 10523
Max. grain size	0.8 mm	

Processing temperature	5 - 30°C	substrate temperature
Pot-life (20°C)	approx. 60 min	
Swelling rate	> 0.5 %	after 24 h

Hardened mortar properties:

Compressive strength		DIN EN 12390-3
after 1 day	approx. 50 N/mm <sup>2</sup>	
after 7 days	approx. 72 N/mm <sup>2</sup>	
after 28 days	approx. 80 N/mm <sup>2</sup>	

Bending tensile strength		DIN EN 12390-5
after 1 day	approx. 6.5 N/mm <sup>2</sup>	
after 7 days	approx. 7.1 N/mm <sup>2</sup>	
after 28 days	approx. 7.7 N/mm <sup>2</sup>	

Tensile force		
after 8 hours	approx. 75 kN	
after 1 day	> 280 kN	

**Processing:**

1. Pretreatment:

The boreholes has to be cleaned from dust by blowing out and pre-wetted. For core drillings it's not necessary to roughen or to prime the substrate.

2. Mixing:

*F9300* should be mixed with a slowly rotating mixer to avoid air pockets. First add 2/3 of the totally required water into *F9300*. After mixing for a short time add the balance of water. It should be mixed for approx. 2-3 minutes.

*Stiff/Plastic consistency:*      5.0 litres of water per 25 kg bag

*Plastic consistency:*      5.7 litres of water per 25 kg bag

*Consumption:* - 25 kg of dry mortar correspond to 14 litres of fresh mortar

For a borehole of Ø 50 mm with a drilling depth of 1 m approx. 3 kg of dry mortar is required when an anchor rod of Ø 28 mm is installed.

3. Grouting:

After mixing *F9300* anchor mortar is grouted into the borehole by means of a spiral pump . In doing so, pump hose is inserted into the borehole and slowly pulled out during pump operation.

Depending on displacement volume of anchor rod only as much mortar is used, that the borehole is completely filled after anchor rod being driven.

**Safety information:**

*F9300* contains cement and is classified as hazardous according to Regulation (EC) 1272/2008 (CLP).

It is therefore necessary, before beginning processing, to become familiar with the precautions and safety advice as indicated in the material safety data sheet.

**Packaging:**

25 kg paper bag

42 x 25 kg on pallet

**Storage:**

Shelf life at least 12 month in original packaging when stored in dry conditions between 15-25°C, protected from heat, frost and direct sunlight.

After the expiration the use of the product is generally not recommended, unless an approval has been provided by TPH. This approval can only be obtained by the quality assurance department of TPH releasing the material after verification of main properties being within specification.

**Disposal:**

Small quantities of cured product residues can be disposed of as normal domestic waste. Dispose of not cured product components must be effected in accordance with the corresponding local regulations. For further information please refer to the material safety data sheets.

**Test certificates:**

Performance characteristics of anchoring products according to EN 1504-6; SGS INTRON Sittard 2011

**Legal notice:**

The correct and thus successful application of our products is not subject to our control. A guarantee can be issued for the quality of our products within the framework of our sales and supply conditions, however not for successful processing. All data and specifications in this specification sheet are based on the present state of the art and the right to changes and adaptations for the sake of development remains explicitly reserved. The consumption specifications designated by us can be only average empirical values, where deviations are possible on an individual basis and therefore cannot be excluded by us.

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**TPH.**  
*Waterproofing Systems*