

F 600 INJECTION GROUT

Filling of joints, cracks, voids and cavities of 0,5 mm in size and more in building structures.

DESCRIPTION: A dry water-proofing injection mixture for construction purposes; the product consists of fine-grained Portland cement and patented chemical additives which are mixed with water prior to application.

PURPOSE: Filling of joints, cracks, voids and cavities of 0,4 mm in size in building structures. The product is applied using an injection pump for sealing, reinforcing and waterproofing concrete. Used as a binder for preparing sloppy shrink-proof concrete and grouts, including those for securing anchors. Depending on the field of application, the consistency, while mixing with water, can vary from plastic to high-fluid.

ADVANTAGES:

- high early compressive strength;
- when mixing with water, a fully-fluid, plastic and easy-to-place mix is formed;
- special additives provide high adhesion and increased strength.
- high water impermeability, freeze and corrosive resistance properties, wear-resistance, durability and no shrinkage;

SPECIFICATIONS:

Parameter name	Parameter name as a function of consistency		
	Plastic	Plastic-liquid	High-fluid
Water-solid ratio	W/S = 0,25	W/S = 0,3	W/S = 0,4
Material moisture content by mass, %, max.	0,3		
Appearance	Loose powder of grey color, free from mechanical impurities		
Bulk density in standard un-compacted state, kg/m ³	880±70		
Mobility, mm, not less than	100	150	150
Initial mobility duration, min., not less than	90	150	150
Setting time, min.:			
- initial set, not earlier than	140	240	360
- final set, not later than	300	540	660
Compressive strength, MPa:			
- in 3days	40	35	15
- in 28 days	65	60	50
Shrinkage deformation (expansion), %, not less than	+0,04	+0,02	+0,01
Bond (adhesion) strength to concrete, MPa, not less than:			
- in 3days	0,6	0,6	0,6
- in 28 days	1,3	1,3	1,0
Water impermeability grade, MPa, not less than	1.2		

PACKAGE: plastic pails (20 kg), big-bags (MKP 800 kg).

STORAGE: When supplied in big-bags, the guaranteed shelf life is 6 (six) months. When supplied in plastic pails, the guaranteed shelf life is 12 (twelve) months from the production date when properly stored in unopened and undamaged original packaging. Storage on the premises with any humidity at a temperature from minus 60 up to plus 50°C is allowed.

TRANSPORTATION: all types of transport.

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F 600 INJECTION GROUT



1504-CPD-0282/ F 600 Injection
manufactured at the
waterproofing materials plant
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1504-CPD-0282
EN 1504-3

F 600 INJECTION

Concrete restoration CC mortar (based on hydraulic cement)
EN1504-3 R4

Compressive strength	: ≥ 45 N/mm ²
Chloride content	: $\leq 0,05\%$
Capillary water absorption	: class R4
Adhesion strength	: ≥ 2.0 N/mm ²
Carbonation resistance	: class R4
Elastic Modulus	: class R4
Corrosion behavior	: contains components only listed in EN 934-1:2008, Annex A.1.
Dangerous substances	: no
Reaction to fire	: Euro class A

F 600 INJECTION GROUT INSTRUCTIONS FOR USE

“F 600 Injection Grout” can be applied when the temperature of the structure surface and ambient air temperatures are from 5 up to 35°C.

SURFACE PREPARATION:

Drill blast holes into the detected cavity in the concrete at a distance of 100-150 mm from each other. When filling a crack, drill blast holes at an angle of 45° in staggered order on both sides from the crack at a pitch equal to the half of the structure thickness. Blast holes shall cross the crack in the middle of the structure thickness. Purge the blast holes with compressed air or rinse with water under pressure, and then install injectors.

MORTAR MIXING: Use only clean container and water to prepare the mortar mix. Prepare only as much mortar mix as can be used within 90-150 minutes (depending on the consistency used and on the crack or cavity dimensions). The optimum mixing water temperature is 20°C \pm 2 °C. In case of temperature decrease, mortar mix setting accelerates. In case of temperature increase, the setting process slows down. Mechanical mixing using a slow-speed drill (500-600 r/min) is optimal. To get a uniform consistency at manual mixing, stir vigorously.

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MORTAR MIXING:

Consistency	Plastic	Plastic-liquid	High-fluid
Water consumption per 1 Litre	0,25 Litre	0,3 Litre	0,4 Litre

First add $\frac{3}{4}$ of the estimated amount of dry mix and stir in water to get a uniform mortar mix. Then add the remaining $\frac{1}{4}$ of the dry mix and continue mixing. The mortar mix is initially characterized by high viscosity that is decreased while mixing. Stir for 5 minutes until you get a plastic homogeneous mix.

Warning! Subsequent addition of water into the prepared mortar mix is not allowed. Prepare only as much mortar mix as can be used within 90 minutes at 20°C (with temperature rise, the initial mobility duration is decreased). Regularly stir the mortar mix during the use to maintain its initial consistency

APPLICATION: Use a manually-operated reciprocating pump to inject the mortar mix "F 600 Injection". Before injection works, check the pump operability by pumping water through it.

Start the injection process and proceed until a pressure surge occurs in the system, or pressure does not increase for a long time (2-3 minutes), or until the injection mix starts flowing out of the neighboring injection hole. Then install a new injector and continue injecting the cavity, void or crack.

If the mortar mix viscosity increases, rinse the pump immediately with water, then prepare a new portion of mortar mix and continue the injection process.

Where the injectors need to be removed, fill the remaining cavities with a mortar mix "PENECRETE MORTAR".

Rinse the equipment with water after injection. The matured and hardened mortar mix "F 600 Injection" can only be removed mechanically.

CONSUMPTION OF DRY MIX:

Water-solid ratio	Mortar mix density, kg/dm ³	Consumption of dry mix, kg/dm ³ of cavity
0,25	1,85 - 2,00	1,70
0,30	1,80 - 1,90	1,60 - 1,65
0,40	1,70 - 1,80	1,50

POST-TREATMENT: The treated areas shall be protected against mechanical effects and temperatures below 5°C for a period of three days. Make sure that the treated surfaces are kept damp for a period of three days. The methods are as follows: periodic water spraying or covering the surface with polyethylene film.

SAFE HANDLING INFORMATION: Wear alkali-resistant rubber gloves when handling this product. The mix contains Portland cement which can irritate eyes and skin. On contact with water, an alkali forms. Avoid contact with eyes while mixing and applying. In case of contact with eyes, rinse immediately with water and seek medical advice.

MANUFACTURER'S GUARANTEE: The manufacturer guarantees the compliance of the fabricated materials with the requirements of CE 1504-CPR-0282/ F 600 Injection provided the instructions for dry mix application are strictly followed.

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