

RC PU INJECT

PU INJECTION FOAM FOR FAST STOPPING WATER

Waterproofing



ADVANTAGES OF RC PU INJECT

- ✓ Very low viscosity
- ✓ Solvent-free
- ✓ High swelling: up to 4000%
- ✓ Semi-flexible

Description

RC PU-INJECT is a resin + catalyst system, water reactive, very low viscous and solvent free. Contains polyurethane injection resin that reacts in contact with water to form a semi-flexible closed cell foam. Ideally suited for stopping water leaks (cracks/tears) in concrete or brick structures. Use with 6-10% catalyst. Is injected with a one-component pump. The end product does not shrink or swell. Good compressive strength is obtained in a very short time. Free expansion: + 4000%.

Properties

- 1-component;
- Reaction rate can be easily determined by adding catalyst between 6 and 10%;
- Due to the closed cell structure of cured polyurethane resin, the cracks/joints are permanently sealed;
- Low viscosity: easy to inject in water-bearing hairline cracks;
- High swelling: in free expansion the resin swells 4000%.

Application instructions

Preparation of substrate

- Remove contamination and surface finishes so that the crack pattern is clearly visible. Leaking cracks that are wider than 3 mm must be sealed beforehand using an appropriate method.
- Drill holes with a diameter depending on the packer/injection nipple to be used. Drill at a 45° angle, preferably staggered around the crack. Drill the holes at a distance of approximately half the thickness of the concrete from the crack, in the direction of the crack.
- The depth of the drill hole should be approximately half the thickness of the concrete.
- The distance between the drill holes depends on the situation and normally varies between 15 and 90 cm.
- Insert the packer into the drill hole to a depth of maximum 2/3 of the drilling depth. Tighten the packer until it is snug enough.
- Flush the crack with water before injecting. This ensures that the substrate becomes dust-free and improves the penetration of the product into the crack. The water in the crack will activate the injected PU-resin.
- Preferably use separate pumps for water and resin injection to avoid blockage of the injection pump.
- The injection pump must be flushed with RC PU-CLEANER before the start of the injection so that it is sufficiently lubricated and dried.

Mixing the product

Shake the catalyst well. Mix the resin and catalyst in a ratio of 6 to 10% catalyst depending on the desired reaction rate. 10% catalyst is used as standard. RC PU INJECT can be injected with a single component pump (manual, pneumatic or electric) using packers.

Inject

- Start the injection at the first packer. Start with the lowest operating pressure of the pump, after which the pressure is gradually increased. The final pressure varies from 14 to 200 bar depending on the size of the crack, the thickness and quality of the concrete.
- Small leaks through the crack indicate migration of the resin, however, large leaks should be stopped and further injected.
- During the injection, the injected water will flow out of the crack in succession, followed by foaming resin and finally pure, non-foaming resin.
- Stop the injection when the pure, non-foaming resin reaches the next packer.
- Advance to the next packer and repeat the previous procedure.
- After injecting some packers it is recommended to go back to the first packer and re-inject it with resin.
- After completing the complete injection, the packers can be re-injected with water so that the residues of pure resin can react.
- Allow the resin to react completely before removing the packers.
- The drill holes can be filled with a cement-based mortar.
- Clean the pump and tools within 30 minutes with RC PU CLEANER.

Consumption

Depending on the depth and width of the crack.

Technical characteristics

Uncured polyurethane resin		
Property	Value	Standard
Density:	1,158 g/cm ³	EN ISO 2811-2:2002
Viscosity:	96 mPa.s	EN ISO 3219:1994
Isocyanate content:	18,1 M.-%	EN 1242:2006
Flash point:	> 150 °C	
Color:	Bruin	

Accelerator		
Property	Value	Standard
Density:	0,889 g/cm ³	EN ISO 2811-2:2002
Viscosity:	21 mPa.s	EN ISO 3219:1994
Flash point:	> 150 °C	

Reaction speed		
% Catalyst	Reaction (sec)	Polymerization (sec)
6	15	70
8	12	55
10	9	45

Indication at 20°C, standard 10% catalyst. Free expansion: approximately 4000% of the initial volume.

Safety

Do not breathe dust/fume/gas/mist/vapor/spray. Wear protective gloves/protective clothing/eye and face protection. In case of inadequate ventilation wear respiratory protection. In case of eye contact: rinse cautiously with water for several minutes; remove contact lenses, if possible; keep rinsing. In case of skin or hair contact: take off immediately all contaminated clothing. Rinse skin with water/shower. Consult the most recent safety data sheet.

Remarks

- Mix RC PU INJECT with the catalyst in the desired dosage. As long as there is no contact with water, the reaction will not start. Any contact with moisture can initiate or accelerate the reaction and cause the pump to block.
- Shake the catalyst before use.
- RC PU INJECT stains other building materials, if necessary these should be adequately shielded.
- Always add the ACCELERATOR to maintain the elasticity of the RC PU INJECT.

Cleaning of equipment

After use of the injection pump, clean the pump with RC PU CLEANER. RC PU-CLEANER is a cleaning product specially developed for cleaning polyurethane injection pumps. This product rinses thoroughly and does not affect the seals.

Storage / Shelf life

To avoid problems, it is very important to understand that these materials are both temperature and moisture sensitive. Therefore, materials should be stored in an area with temperatures not exceeding 30°C or not lower than 10°C. The maximum shelf life is one year. All partly used drums should be covered by nitrogen and resealed to prevent the ingress of moisture.

Packaging

- 1 kg injection resin (item no. 100906) and 0.1 liter of catalyst (item no. 100907).
 - 5 kg injection resin (item no. 100916) and 0.5 liters of catalyst (item no. 100917).
 - 25 kg injection resin (item no. 100926) and 2.5 liters of catalyst (item no. 100927).
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Photos



Equipment



Manual pump (art.nr. 121117)



(Injection nipple art.nr. 121001)



Manual pump

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Legal Notes

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