CE

TEKINJECT PU 1C STOP

TEKINJECT

TECHNICAL DATA SHEET

1-component (+CAT), low viscous, solvent free polyurethane based injection system. Reacts in a semi-rigid, closed cell foam in combination with water.

Designed for crack sealing and stopping water under pressure.



I. Applications

TEKINJECT PU 1C STOP is an extremely versatile injection system that can be used for the injection of very fine cracks, and as well for extremely large water intrusions. Variable reaction time ensures sealing and penetrations in a variable application field:

- Due to its low viscosity, it can be used to seal very fine cracks (from 0,2 mm to several cm)
- Sealing of water under extremely high flows and high pressure (> 104 bar)
- Injection of injectable hoses
- Soil injections and creation of horizontal and vertical barriers

II. Properties

- TEKINJECT PU 1C STOP is a 1-component (+cat), polyurethane based injection system that needs water to react and reacts into a semi-rigid, hydrophobic grout that reacts in a closed cell structure.
- Good chemical resistance against many acids, bases, solvents, and fuels (check chemical resistance list)
- No shrinkage after curing
- Free expansion: up to 30 times
- Non-toxic: does not contain solvents.
- Non-flammable.
- Excellent adhesion to mineral building materials such as concrete, cement and brick.
- Variable reaction time by adjusting the TEKINJECT PU 1C CAT. Even quicker reaction times can be obtained by adding the TEKINJECT PU 1C ACCELERATOR.

All information is given in good faith. The application, use and processing of these products are beyond our control and therefore TEKINJECT cannot be held responsible for the results obtained and any damage.
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III. Technical Data

- Typical values:

TEKINJECT PU 1C STOP RESIN:

Color	Brown
Viscosity (20°C) (EN ISO 3219)	Ca 120 mPa.s
Density (20°C) (EN ISO 2811)	Ca 1,18 g/cm^3
Flash point	>148 °C
Storage temperature	Between 10 °C and 30 °C

TEKINJECT PU 1C CAT:

Color	Transparant yellow
Viscosity (20°C) (EN ISO 3219)	Ca 35 mPa.s
Density (20°C) (EN ISO 2811)	Ca 1,01 g/cm^3
Flash point	>148 °C
Storage temperature	Between 10 °C and 30 °C

TEKINJECT PU 1C STOP Mixture:

Color	Brown
Viscosity (20°C) (EN ISO 3219)	Ca 110 mPa.s
Density (20°C) (EN ISO 2811)	Ca 1,15 g/cm^3
Expansion Volume	Up to 30 times in volume
Compressive strength (after 6 weeks, reaction with quartz type H32) (EN 12190)	11,5 MPa (xpV1)
E-Modulus (after 6 weeks, reaction with quartz type H32) (ISO 527)	295 MPa

- Reaction times:

Temperature	**2 % CAT**		**6 % CAT**		**10 % CAT**	
	Start	**end**	**Start**	**End**	**Start**	**End**
5 °C	1’ 05”	3’ 20”	20 “	1’ 10”	10”	45”
15 °C	29”	2’05”	15”	59”	9”	42”
20 °C	25”	1’ 42”	14”	53”	10’	40”
25 °C	20”	1’ 40”	11”	47”	10”	40”
40 °C	16”	1’ 37”	9”	47”	8”	39”

TEKINJECT PU 1C STOP reacted with 5 % water (PH 7).

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IV. Processing

1. Resin preparation

Create 1 mixture with the TEKINJECT PU 1C STOP RESIN and adequate quantity TEKINJECT PU 1C CAT.

Depending on the ambient and structure temperature, the reaction times will vary (check 3. Technical data, Reaction times). The higher the temperature, the quicker the reaction time.
Secondly the amount of water present in the structure will also influence the reaction time of the mixture. The reaction time of the mixture can be altered by changing the component TEKINJECT PU 1C CAT (check 3. Technical data, Reaction times). The more TEKINJECT PU 1C CAT is added, the quicker the reaction time. We recommend a maximum of 10% TEKINJECT PU 1C CAT to be added. For quicker reaction times, we recommend using the TEKINJECT PU 1C ACCELERATOR.

2. Substrate preparation

Check the quality of the substrate, injection means increased pressure on the substrate, so the substrate needs to be of sufficient strength.

Determine the packers according to the injection technique, substrate dimensions and type of pump. According to the selected packer and injection technique, the holes in the substrate need to be drilled. Tighten the packers well to make sure the injected pressure is distributed.
The distance and pattern of the packers/bore holes depend on the substrate structure and the injection technique. Please consult your TEKINJECT contact person for more information or the specific application manuals of the injection techniques.

3. Injection

The TEKINJECT PU STOP mixture needs to be injected with a 1-component pump.
The selected injection pressure is as low as possible. Start at the lowest point and increase until you see the resin flowing. Injection with low pressure ensures a deeper penetration of the resin and complete sealing of the structure.

Start injecting at the lowest point in case of a vertical application and at the widest point for a horizontal application. Open the valve of the gun, hold the pressure, and inject until the resin appears in the next packer. Stop pumping and proceed to the next packers. To make sure the material is penetrated in the full structure, opening and closing the valve and letting the material flow, can be advised. Continue the process until the whole structure is sealed.

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4. Cleaning

If the components are liquid, the pump can be cleaned with TEKINJECT PU CLEANER. Hence, we recommend, every time there is a stop of more than 15 minutes, and at the end of the injection works to flush the pumps with TEKINJECT PU CLEANER, which is a cleaner with high flash point.

Hardened material needs to be cleaned with PU dissolver.
Packers can be removed, and the boreholes can be sealed with a fast-setting mortar.

For more details see the application manual of the TEKINJECT PU 1C STOP.

V. Packaging

TEKINJECT PU 1C STOP RESIN:	20 kg plastic jerry can 1050 kg IBC
TEKINJECT PU 1C CAT:	2 kg plastic bucket 20 kg plastic jerry can

VI. Shelf life

24 months after production date in the original, unopened and undamaged packaging, according to the storage instructions of each component (see technical data of this sheet). If the following recommendations are not followed, the shelf life of the material cannot be guaranteed.

VII. Precautions and Safety Recommendations

- Wear safety and protection materials when handling this material (glasses, gloves, protective clothing).
- In the event of contact with the eyes: rinse thoroughly with clean water and consult a doctor.
- In the event of skin contact: rinse with water thoroughly.
- Mix residues of the TEKINJECT PU 1C STOP with sand and dispose of in accordance with local regulations.
- The resin can react with water or atmospheric humidity to form CO2 gas. This can build up pressure in a closed package or container that has already been opened.
- Consult the Material Data Safety Sheet for more information on health and safety regulations.

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VIII. Company Details

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IX. CE Marking

Notifying body: BCCA, Cantersteen 47, BE-1000 Brussels
Notifying body number: 0749
Certificate of conformity of the factory production control:
0749-CPR-BC-2-565-27704-0001-0001

Essential characteristics	Performance	Harmonized technical specification
Watertightness, EN 14068 (crack conditioning) without movement in concrete	>= 2 x 10^5 Pa No water Leak	EN 1504-5 :2014
Compatibility with Concrete EN 12637-1, EN 1504-5 table 3c n°8	< 20% lost deformation work	
Determination of pot life: Bond strength EN ISO 9514 and EN 1542	Temperature 10°C Initial :0,20Mpa	
	Temperature 23 °C Initial: 0,28Mpa	
	Temperature 30°C Initial 0,28Mpa	
Glass transition temperature °C	Not relevant	
Injectability according EN 1771	Easy injectable into moist sand	
	Easy injectable into wet sand	
Determination of the adhesion of injection products (% of fulfilled cracks) EN 12618-2	% of filling of the crack has been 100%	

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