Technical Data Sheet

PT AC-Injection-Gel

PT AC-Injection-Gel Base (Comp. A1)
PT AC-Injection-Gel-Accelerator (Comp. A2)
PT AC-Injection-Gel-Granulate (Comp. B1)

- Hybrid structure acrylate gel for injection -
(solvent-free, permanent watertight, very low viscosity)

Product description

PT AC-Injection-Gel consists of 3 components, PT AC-Injection-Gel Base (Comp. A1), PT AC-Injection-Gel Accelerator (Comp. A2) and PT AC-Injection-Gel Granulate (Comp. B1). PT AC-Injection-Gel has a similar consistency as water and, like water, it penetrates into all cavities. PT AC-Injection-Gel hardens into a gelatinous waterproofing membrane, which through its elasticity makes the sealing layer resistant to vibration or movement and thus to pressure and tension. The end product does not swell up or shrink when subjected to prolonged moisture. In contrast, dryness shrinks the final product which only swells up again upon contact with water. PT AC-Injection-Gel is reversible and therefor adapts to fluctuations in the moisture and dryness levels of its surrounding environment. Due to swelling pressure, PT AC-Injection-Gel is not dependent on edge adhesion in order to seal permanently. Therefore, the proliferation of a contamination does not pose any danger. The hardening time can be set to minutes or hours through specified dosing of PT AC-Injection-Gel Accelerator and can be adjusted individually according to the construction site. The end product of PT AC-Injection-Gel is non-toxic and environmentally friendly.

Application areas

PT AC-Injection-Gel is used in different application areas. First application area is for curtain injection into the soil. Secondly for area injection into the substrate (for example masonry) and thirdly for subsequent sealing of expansion joints. Additionally PT AC-Injection-Gel is suitable for soil stabilization and filling of cavities.

Product advantages

- **Hybrid structure polyacrylic gel**
- **Self swelling properties, not only bonding tot he substrate**
- **Reaction time adjustable with accelerator (not salt)**
- **Very elastic**
- **Highly flexible**
- **Solvent-free**
- **Phenol-free**
- **Suitable as gel in different application areas**
- **Excellent penetrations properties**
- **Very low viscosity**
- **Application with 2K injection devices**
- **“Made in Germany”**

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Specification

Base	: 3 comp. hybrid structure gel
Color	: yellow
Working temperature	: +5°C up to + 30°C
Density:	
(DIN EN ISO 2811-2:2011-02)	: 1,10 g / ml (+ 25°C)
Injection viscosity	
DIN EN ISO 3219:1994-10)	: ca. 1,5 - 10 mPas
ph-value	
(DIN EN ISO 10523:2012-04)	: 5,8
Mixing ratio	: 1 : 1 (component A : component B)
Gel time	: depend of mixing ratio and temperature
During time with water	: depend of mixing ratio and temperature
Mischungsverhältnis	: 1:1 (component A : component B)
Reaction time	: depend on quantity of accelerator and temperature
Consumption	: depend of cavity occurence and area of application Area injection in walls: approx. 20 kg/m² (mixed gel) Curtain injection: 30 kg/m² (mixed gel) Expansion joint injection: approx. 1 kg/l cavity
Mixing	: PT AC-Injection-Gel Comp.A: Base component (28 kg) A1 + Accelerator (1,25 kg) A2 Comp. B: Granulate (1 kg) B1 + 28 liter water Mixed = 58,2 kg injection gel

According to CE 1504-5.

All technical datas are measured in our laboraty.

Please take notice about the safety information and advice given on the safety data sheets and packaging labels.

Reaction time:
Water temperature: 21°C

Comp. A2 quantity (in kg)	Gel time (approx. seconds)	Reaction time (approx. seconds)	
1,2 kg	38	220	
1,0 kg	43	250	(Standard mixing)
0,8 kg	60	300	
0,6 kg	80	380	
0,4 kg	130	500	

Notice:
The consumption is always depending of surface, substrate and wanted curing time and can change.

Delivery form

28.0 kg canister PT AC-Injection-Gel-Base (Comp. A1)	Article-No. 01700028
1.25 kg bottle PT AC-Injection-Gel-Accelerator (Comp. A2)	Article-No. 01700001
1 kg tin PT AC-Injection-Gel-Granulate (Comp. B1)	Article-No. 01700002

Storage

12 months (frost-free and dry, +5°C up to +25°C in original packaging, protected from UV-light for PT AC-Injection-Gel-Base and PT AC-Injection-Gel-Granulate.

6 months (frost-free and dry, +5°C up to +25°C in original packaging, protected from UV-light for PT AC-Injection-Gel-Accelerator.

Application

Surface preparation

Before starting injection procedure, an analysis of the to be waterproofed subject is required. On hand of analysis results (water situation, crack properties, crack width, cavity occurrence, water temperature etc.) choose the right mixing ratio of injection gel. For injection PT Injection Lances must be installed horizontal (area injection and curtain wall injection) or in a 45° direction (expansion joint injection). The diameter of boreholes depends on the diameter of the used injection lances (for example: 20 mm packer diameter = 21 mm borehole diameter). The packers must be set tightened by using the right tools, so they do not release even at high injection pressures.

Material

PT AC-Injection-Gel will be processed through 2K injection devices (please send inquiry) with a mixing ratio of 1 : 1. The mixing of material (mixed comp. A + mixed comp. B) will be done in the mixing lance of injection device, that means immediately before injection. The mixing ratio must be adjust at the injection device before starting injection. The injection proceeds with an initial pressure of maximum 7.5 bar. Depend of situation the injection pressure can change.

The PT AC-Injection-Gel-Base (component A1) which has been pre-treated with a PT AC-Injection-Gel-Accelerator (component A2), hardens with the addition of a water-based solution of PT AC-Injection-Gel-Granulate (component B1). The standard mixing ratio of PT AC-Injection-Gel regarding pre-mixed component A and component B is 1:1, so that for processing, double the amount is available compared to the quantity delivered. All standard injection systems and methods are suitable for use when processing.

PT AC-Injection-Gel is either pressed into the sealed building substance (for example masonry) or into the soil behind of the wall (curtain injection, outside, positive side waterproofing). For flexible expansion joint injection the PT AC-Injection-Gel must be injected directly into the joint to fill the joint.

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Mixing instructions:
Component A: 28 kg PT AC-Injection-Gel-Base (Comp. A1) (black canister) has to be mixed with approx. 1.25 kg PT AC-Injection-Gel-Accelerator (Comp. A2) as component A.
Component B: 28 Liter of lukewarm water (Winter) or normal temperature-controlled water (Summer) should be mixed thoroughly good with PT AC-Injection-Gel-Granulate (Comp. B1) until the granulate is solved in water as component B. Inject both components in a mixing ratio 1:1.

Please note: The processing equipment has to be made of stainless steel.

All filling and injection hoses must be protected from UV rays. Therefore, if possible only sheathed pressure pipes should be used and in no event should transparent hoses be used for injection or the suction of either of the components A or B. In quick setting mixtures two piston pumps are used.

Important note: There is a detailed processing description enclosed in your material order. You can also request it from us. Please note the remarks in the description and refer to them in order to successfully complete sealing jobs for your customers.

Area injection:
The area to be sealed will be provided with PT Injection Lances in a horizontal grid of max. 20 to 30 cm. The holes must be drilled to a depth of 2/3 of wall thickness. The lances mounted horizontally and every second row is offset. The injection begins after the mixing ratio is adjusted at the injection device and starts with the lowermost lance row line by line and is upwardly continued. The material will be injected until injection gel exiting at the adjacent lance or the appropriate amount of material is injected. The injection has to take place continuously, so that no material reacting in the mixing device.

Curtain injection:
The area to be sealed will be provided with PT Injection Lances in a horizontal grid of max. 20 to 30 cm. The holes must be drilled through the construction/wall. The lances mounted horizontally and every second row is offset. The injection begins after the mixing ratio is adjusted at the injection device and starts with the lowermost lance row line by line and is upwardly continued. The material will be injected until injection gel exiting at the adjacent lance or the appropriate amount of material is injected. The injection has to take place continuously, so that no material reacting in the mixing device.

Expansion joint injection:
The PT Injection Lances must be set in a 45° direction to the joint with a gap of 30 cm so that holes cross the joint in the middle. Before starting injection clean out the joint from all material. The joint must be closed to the inside, for example, with PE round rod and a wooden board so that PT AC-Injection-Gel cannot run out of the joint.

After PT AC-Injection-Gel is completely cured the boreholes have to be sealed with PT Waterstop Mortar or PT Swelling Mortar. Depend of cavity occurrence the mentioned consumption quantities can change. Changes in temperatures (air, substrate, material, water) will have changes in the reaction characteristics of material. Please note that PT AC-Injection-Gel cannot be inject in alkaline water, this effects reaction problems. After PT AC-Injection-Gel is completely cured it is alkaline stable.

Tools and equipment should be cleaned immediately after use with PT Cleaner PUR. Cured material can only be removed mechanically.

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Recommended tools
2-K injection device, gloves, safety glasses
PT Injection Lances
PT Waterstop-Mortar
PT Swelling Mortar

Application areas:

Remarks
The information given in this technical data sheet corresponds to the current state of development and is based on our experience, our knowledge and is non-binding. An investigation has to be done with focus on the respective building project and the area of application. The technical expert advice of proof-tec employees does not exclude the planning or control by an engineer. We are liable within the scope of our general delivery and sales conditions, we are not liable for the application of our materials. The generally accepted rules of technology must be observed. If necessary, preliminary tests have to be carried out.

Version 02/2017
All previous versions of this technical data sheet are not valid anymore and should not be used anymore.