



PC-inject Seal® PU 300

Flexible Polyurethane Injection Foam for Permanent Water Leakage Prevention

PC-inject Seal® PU 300 is a two-component Polyurethane injection resin with low viscosity designed for grouting and sealing cracks and fissures that hold water in concrete and brick structures. This solvent-free resin initiates a chemical reaction upon the mixture of both components, transforming into a flexible and elastic gel. When in contact with water, the resin expands, effectively creating a flexible seal. For optimal results, it is advisable to combine **PC-inject Seal® PU 300** with **PC-inject Seal® PU 200** to effectively stop water flow.

FEATURES & BENEFITS

- Excellent adhesion to dry and wet substrate.
- Remains flexible at extremely low temperatures.
- Cured resin remains stable and does not shrink over time.
- Cured gel is chemically inert and nonhazardous to environment.
- Resistant to high hydrostatic pressure and forms a permanent seal.
- Cured gel is non-toxic and can be used in contact with potable water.
- Extremely low Viscosity.
- Ability to penetrate fine cracks under pressure.
- The hardened gel/foam remains flexible. Can accommodate movement in concrete.
- Forms a permanent seal which is highly elastic and flexible. Can accommodate movements in concrete.
- Form a hydrophobic foam when it meets water in the cracks or fissures to force the water out from the structure.

USES

PC-inject Seal® PU 300 is meticulously developed to establish a durable and flexible seal within water-bearing cracks and fissures present in concrete, block work, and brickwork. This formulation is adept at sealing dry cracks and joints in concrete that are susceptible to shifting. Moreover, it proves efficient in injecting non-re-injectable hoses commonly utilized in concrete joints.

APPLICATION INSTRUCTION

Trained and experienced teams are recommended to conduct the injection grouting process. Prior to initiating grouting, it is imperative to thoroughly review the comprehensive method statement. The Polyurethane resin, comprising base and Hardener components, is supplied in distinct vacuum-sealed canisters. It is advisable to blend the entire kit in one operation; however, for smaller areas, partial mixing may suffice. Ensuring the accurate volume mixing ratio is maintained is essential to achieve optimal performance.

MIXING

Pour the required amount of hardener (Part B) into the resin (Part A) container following a 3:1 ratio (Part A: Part B), and thoroughly blend the mixture using a suitable paddle mixer connected to a standard drill. Stir the compound for about 3 minutes until achieving a consistent blend. It is essential to use the mixed resin within the specified pot life for optimal results.

INJECTION PROCESS

All fissures or joints requiring sealing should undergo a meticulous cleaning process to eliminate debris and loose particles. To establish a stitch-like pattern, it is advised to drill holes at a 45° angle on either side of the crack in a crisscross fashion, ensuring they intersect at the center. Subsequently, insert durable steel packers into the holes and firmly affix them. Address any honeycombing in the concrete by sealing it with a quick-setting mortar plug. Prior to commencing the grouting procedure, thoroughly cleanse the hoses with a cleaning solvent to eliminate any residual impurities.

Inject the required amount of blended resin into the feed container of the injection pump. Commence the injection grouting procedure by maintaining a steady pressure between 2 to 3 bar, incrementally raising it to a maximum of 4 bar. Start the injection either from the lower end or one extremity, progressing until the crack's end or upon encountering resin rejection from the nearby packer or the crack itself. Proceed with the injection process from the succeeding packer thereafter.

CLEANING

Upon completing the injection process, it is imperative to immediately cleanse the injection hose with a suitable cleaning solution to remove any residual resin. In cases of clogging, manual clearance of the hoses is necessary.

PACKINGS

PART A: 15 Litter Part B: 5 Litter

LIMITATIONS

- Component B contains Isocyanate, rendering it hazardous, particularly in its liquid and unmixed states. It is imperative to employ appropriate Personal Protective Equipment (PPE) during its handling.
- Due to its slow curing nature, this product is unsuitable for stopping water flow. It is recommended to apply it subsequent to the use of **PC-inject Seal® PU 300**, a rapid-acting PU resin, for halting water ingress.
- Disposal of any leftover or incompletely mixed materials should adhere to prescribed protocols for hazardous substances.



PRODUCTS PROPERTIES

| Physical Properties | Test Method | Value |
|--|---------------|---------------------------------|
| Color & Consistency | - | Transparent Liquid/Brown Liquid |
| Odour | - | None/ Characteristic |
| Density @25°C, (g/l) | EN ISO 2811-1 | 1.0±0.02 /1.21±0.02 |
| Viscosity @25°C, (mPas) | EN ISO 2555 | 300 /100 |
| Viscosity of the mix @25°C, (mPas) | EN ISO 2555 | 200 |
| Gel time (Pot life) @25°C, (mins) | ASTM D 7487 | 3-4 |
| Final cure, (Hrs.) | - | 24 |
| VOC, (g/L) | - | ≤10 |
| Tensile strength, (N/mm ²) | ASTM D 412 | ≥1.5 |
| Elongation, (%) | ASTM D 412 | ≥75 |
| Bond strength (concrete), (N/mm ²) Dry Moist | EN 1542 | ≥0.5 ≥0.8 |
| Ambient temperature, (°C) | - | 5 to 45 |
| Substrate temperature, (°C) | - | 5 to 45 |

All values given are subject to 5-10% tolerance

STORAGE

In hot climates, it is recommended to store **PC-inject Seal® PU 300** in a dry and cool location. To preserve the product's shelf life and effectiveness, refrain from storing it below 5°C or above 35°C. It is advisable to store the material in an air-conditioned environment within these regions.

HEALTH AND SAFETY

The product **PC-inject Seal® PU 300** includes Isocyanate and demands the use of appropriate personal protective equipment (PPE) and safety glasses during handling and application. Injection grouting should be executed by proficient individuals. Improper use of the product may lead to potential hazards.



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TDS/PC-INJECT SEAL® PU 300/20

All technical data in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

The information, particularly the recommendations relating to the application and end-use of PC-WC products, are given in good faith based on PC-WC's current knowledge and experience of the products when properly stored, handled and applied under normal conditions by PC-WC recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or any other advice offered. The user must test the product's suitability for the intended application and purpose. PC-WC Global FZ-LLC reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our [website www.pc-wc.com](http://www.pc-wc.com)