



PC-Inject Seal® EP

Two-component low viscosity epoxy injection resin for cracks

PC-Inject® Seal EP is a solvent-free, two-component epoxy system recognized for its remarkable adhesion to both concrete and steel surfaces. This transparent product is acclaimed for its superior compressive and flexural strength, retaining its efficacy even on moist substrates. Its versatility in application ranges from conventional brush methods to advanced one or two-component pressure injection equipment.

FEATURES

- Solvent-free, low VOC, and non-shrink.
- Packaged in pre-proportioned quantities to prevent errors on-site.
- Low viscosity for effortless injection into narrow cracks.
- Offers high bond strength to concrete, capable of restoring structural integrity.
- Hardens effectively at low temperatures, suitable for a wide range of applications.
- Exhibits a high heat deflection temperature, making it ideal for high-temperature environments.

PRODUCTS PROPERTIES

Physical Properties	Typical Value
Product	two-component epoxy resin
A-component color	transparent
B-component color	yellow transparent
A+B color	yellow transparent
Viscosity	280 ± 60 m Pa.s at +23°C max.
A-component density	1.10 ± 0.03 kg/lit
B-component density	1.00 ± 0.03 kg/lit
A+B density	1.08 ± 0.03 kg/lit
Mixing ratio (A+B)	100:23,5 by weight
Pot life	approx. 45 min at 20°C
Water Absorption	0.62% w/w after 7 days
Minimum hardening temperature	+8°C
Final strength:	After 7 days at at +23°C
Adhesion by tensile bond strength (EN 12618-2)	4.9 N/mm ²
Adhesion by slant shear strength (EN 12618-3)	Monolithic failure
Volumetric shrinkage	1.7 %
Glass transition temperature (EN 12614)	≥ 74 °C
Durability	Pass
Compressive strength (DIN EN 196-1)	70 N/mm ²
Flexural strength (DIN EN 196-1)	63 N/mm ²
Tensile strength (ASTM D 638)	25.7 N/mm ²
Elongation at break (ASTM D 638)	2.2%

USES

Efficiently repairing structural cracks, sealing fissures ranging from 0.1mm to 10mm, addressing gaps behind tiles or stone facades, affixing steel plates to concrete surfaces, expediting concrete structural restoration, and grouting dowels.

SURFACE PREPARATION

Before initiating the injection process, it is imperative to conduct a thorough examination of the structure in alignment with current industry standards and technological protocols. Subsequently, an injection plan must be meticulously devised. Placement of packers before injection is essential, and it is advisable to conduct a trial injection as a precautionary measure.

MIXING

Components A (resin) and B (hardener) are individually stored in separate containers with pre-established weight proportions for mixing. To commence, the entirety of component B should be combined with component A. The blending process should persist for approximately 5 minutes using a suitable hand tool such as a small trowel. Thorough mixing is paramount, ensuring the hardener is uniformly dispersed by stirring meticulously along the container's sides and base. If a lesser quantity is necessitated than what is supplied in the package, a ratio of 4 parts by weight of component A to 1 part by weight of component B should be amalgamated in a pristine container following the same mixing procedure.

APPLICATION PROCEDURE

• Resin Injections Procedure:

1. Remove any existing plaster from both sides of the crack and meticulously clean the concrete surface.
2. Seal the crack using **PC-Conrend®Plug** and install injection nozzles approximately every 20 cm along the crack using the same product.
3. Once the **PC-Conrend®Plug** has set, commence injecting **PC-Inject Seal®EP** into the crack by pushing the material through the nozzles, following these steps:
 - Position the resin outflow tube (e.g., spirit level tube) in the initial nozzle. For a horizontal crack, initiate from one end; for a vertical crack, start from the lowest nozzle.
 - Adjust the outflow valve of the compression boiler to inject into the first nozzle until **PC-Inject Seal®EP** flows out of the adjacent nozzle or until no more pressure can be applied.
 - Close the first nozzle and proceed with injection through the successive nozzles.
 - Repeat this sequence until the entire length of the crack has been treated. Allow the material to cure, and the following day, remove (break) the protruding nozzles and reinstate the plaster surface.



PACKAGING

PC-Inject Seal®EP is supplied in packages (A+B) of 1 kg and 3 kg, with components A and B having a fixed proportion by weight.

SHELF LIFE

24 months from production date, if stored in original sealed packaging, in areas protected from humidity and direct sun exposure. Recommended storage temperature: between 5°C and 25°C.

CURING

The curing time of **PC-Inject Seal®EP** will differ based on ambient temperature, quantity used, and application technique. Complete curing typically occurs after 7 days at 23°C.

REMARKS

- The effectiveness of epoxy materials is contingent upon temperature conditions. To achieve optimal results, it is recommended to apply the product within a temperature range of +15°C to +25°C, ensuring ideal workability and curing efficiency. Curing time is prolonged in environments below +15°C and accelerated in temperatures surpassing +30°C. To ensure consistency, gently warm the product during colder seasons and store it in a cool environment before applying it in warmer conditions.
- **PC-Inject Seal®EP** poses no health risks once it has fully hardened.
- Before application, it is imperative to review the safety instructions and precautions outlined on the product packaging.

• Anchoring:

Begin by drilling holes with a larger diameter than the rods to be installed, ensuring they are as deep as feasible. When drilling for vertical elements, it is advisable to create holes in a downward direction rather than horizontally. Subsequently, use compressed air to clear any debris from the holes. Proceed by pouring **PC-Inject Seal®EP** into the holes, slightly exceeding the required quantity to allow for the material to overflow upon inserting the rod.

CLEANING OF EQUIPMENT

It's crucial to clean all tools and application equipment with water immediately after use. If materials are allowed to harden or cure, they can only be removed through mechanical means.

HEALTH AND SAFETY

PC-Inject Seal®EP incorporates cement powders that, upon exposure to moisture, release alkalis that can pose risks to the skin. To safeguard against these hazards, it is imperative to avoid inhaling the dust and prevent skin and eye contact during usage. Utilize appropriate protective gear such as clothing, gloves, eye protection, and respiratory equipment. Furthermore, the application of barrier creams can offer added skin protection. If skin contact occurs, promptly rinse with copious amounts of clean water followed by cleansing with soap and water. In the event of eye contact, immediately rinse with abundant clean water and seek medical attention. If ingested, seek immediate medical assistance without inducing vomiting.



PC-WC GLOBAL FZ-LLC

Compass Building, Al Shohada Road Al-Hamra Industrial Zone-FZ,
Ras Al-Khaimah, UAE
Email: info@pc-wc.com
Phone +971542455817, www.pc-wc.com

TECHNICAL DATA SHEET UPDATED IN
SEPTEMBER 2020
TDS/PC-INJECT SEAL®EP/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)