



PC-Inject Seal® PU 200

Polyurethane-Based Injection resin foam for temporary Water Leakage Mitigation

PC-Inject Seal® PU 200 is a two-component, low-viscosity, solvent-free, water-reactive polyurethane injection resin that rapidly expands upon contact with water. Consisting of a base (Part A) and a Catalyst (Part B), this product is designed to swiftly create a dense and flexible foam. Its primary function is to effectively seal concrete cracks in tunnels and construction sites, thereby swiftly stopping water flow.

FEATURES & BENEFITS

- The cured foam exhibits remarkable stability.
- It showcases exceptional adhesion to wet surfaces.
- Demonstrates resistance to high hydrostatic pressure.
- Rapidly expands, forming a dense cell structure.
- Adjusting the Catalyst dosage can reduce the pot life.
- The cured foam is non-toxic and suitable for use with potable water.
- The foaming reaction commences upon contact of the mixed resin with water. Unreacted resin remains viable for approximately 6-8 hours, reducing material wastage.

APPLICATION INSTRUCTION

It is recommended to engage a skilled and proficient team to undertake the injection grouting process. Prior to commencing the grouting procedure, a thorough review of the detailed Method Statement is imperative. The Polyurethane resin, comprising both Base and Catalyst components, is packaged in vacuum-sealed canisters. It is advisable to blend the complete kit in one operation. Nevertheless, in the case of smaller grouting areas, a reduced kit size may be more suitable.

INJECTION PROCESS

All cracks or joints requiring sealing should be meticulously cleared of debris and loose particles. Create a stitch-like pattern by drilling holes at a 45° angle on both sides of the crack in a crisscross manner, ensuring intersection at the crack's midpoint. Insert premium steel packers into the drilled holes securely. Address any honeycombs in the concrete by applying a rapid-setting mortar plug. Before commencing the grouting procedure, cleanse the hoses with a cleaning solvent to eliminate any residual impurities that may lead to obstructions.

Pour the required amount of the mixed resin into the injection pump's feed container. Begin the injection grouting process by sustaining a steady pressure of 2 to 3 bar, gradually elevating it to a maximum of 4 bar. Start injecting from the lower end or one side, continuing until the crack is completely filled or until water stops seeping out from the crack.

USES

The **PC-Inject Seal® PU 200** is specifically formulated to promptly halt water flow from concrete cracks or joints, creating a provisional seal before the application of a permanent polyurethane grout such as **PC-Inject Seal® PU 300** (Flexible gel). Moreover, it serves the purpose of filling voids in both brickwork and concrete structures.

MIXING

Commence by pouring the requisite quantity of catalyst (Part B) into the base (Part A) container and blend them meticulously using a suitable paddle mixer affixed to a standard drill. Mix the components for approximately 3 minutes until a consistent blend is achieved. Ensure that the mixed resin is utilized within its pot life, which spans from 6 to 8 hours. It is important to note that the shelf life diminishes if stored above +25°C or below +5°C. Maintain the product in an upright position during both storage and transportation. Prior to application, allow the product to acclimate to room temperature for at least 12 hours. Please bear in mind that cured foam may exhibit color variations when exposed to ultraviolet light.

For enhanced durability in outdoor environments, contemplate applying a protective paint or coating to the cured foam.

CLEANING

Upon completing the injection process, it is imperative to immediately cleanse the injection hose using a cleaning solvent to eliminate any residual resin. Hoses that become obstructed can solely be cleared through mechanical means.

PACKINGS

Part A: 10 Ltr

Part B: 1 Ltr

LIMITATIONS

- Avoid using this product in injection hose systems.
- This product includes Isocyanate, necessitating the use of appropriate personal protective equipment during application.
- Due to its susceptibility to water and moisture, it is imperative to keep all tools and equipment dry.
- **PC-Inject Seal® PU 200** is specifically designed for temporarily sealing flowing water; for permanent crack sealing, alternative PU injection resins such as **PC-Inject Seal® PU 300** are required.
- Properly dispose of any unused or partially mixed materials according to the designated hazardous materials disposal protocols.



PRODUCTS PROPERTIES

Physical Properties	Test Method	Value	
Color & Consistency	-	Base (Part A) Brown Liquid	Catalyst (Part B) Amber Liquid
Density @25°C, (g/l)	EN ISO 2811-1	Base (Part A) 1.15±0.02	Catalyst (Part B) 0.9±0.02
Viscosity @25°C, (mPas)	EN ISO 2555	Base (Part A) 230±5.	Catalyst (Part B) 5±5
Start of Expansion, (secs)	-	8-10 (after contact with water)	
Pot life of mixed material (Before contact with water), (Hrs.)	-	6-8	
VOC, (g/L)	-	≤10	
Free foam expansion	-	Up to 50 times	
Elongation, (%)	ASTM D 638	≥15	
Ambient temperature, (°C)	-	5 to 45	
Substrate temperature, (°C)	-	5 to 45	

All values given are subject to 5-10% tolerance

Tested at 25°C and 50% RH with 10% water	0% Cat	5% Cat	10% Cat	Test Standard
Cream time (start of foaming), (secs)	20	12	8	ASTM D 7487
Free rise time (end of foaming), (secs)	190	45	25	ASTM D 7487
Volumetric expansion factor	54	64	75	ASTM C 1643

STORAGE

PC-Inject Seal® PU 200 should be stored in a cool and dry environment. In regions with elevated temperatures, it is recommended to store the product in a location with air conditioning. It is imperative to avoid storing the material below 5°C or above 35°C, as extreme temperatures can adversely affect both the shelf life and efficacy of the product.

HEALTH AND SAFETY

PC-Inject Seal® PU 200 contains Isocyanate, necessitating the use of proper personal protective equipment (PPE) and safety glasses during handling and application. The injection grouting procedure should solely be executed by experienced individuals, as improper usage of the product can present significant risks.



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TECHNICAL DATA SHEET UPDATED IN
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TDS/PC-INJECT SEAL® PU 200/20

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