

Keminject PU 200

Hydrophilic Polyurethane Injection

Description	Keminject PU 200 is a 1-component, MDI-based, hydrophilic, VOC-free, polyurethane based injection system. Reacts in a flexible and dense foam in combination with water. Designed for sealing joints, cracks and stopping high volumes of water
Where to use	Keminject PU 200 is an injection system used for sealing joints, cracks and stopping high volumes of water. In combination with sufficient water, it can be used for sealing of: • Sealing of cracks (from 0.3 mm up to 20 mm) • Sealing of joints (from 20 mm up to 200 mm) • Sealing of water under high flow • Excellent sealing capabilities to seal tunnel segments
Advantages	• Keminject PU 200 is a 1-component, polyurethane based injection system that needs sufficient water in order to react and transforms into a flexible and dense closed cell compound material • Even in alternating water tables, the hydrophilic capabilities of the resin ensure a long-term sealing by reversible swelling • Good chemical resistance against many acids, bases, solvents, and fuels (check chemical resistance list) • Free expansion (depending on the amount of water used): - o 1 volume of resin – ½ volume of water: up to 8 times - o 1 volume of resin – 1 volume of water: up to 4 times - o 1 volume of resin – 2 volumes of water: up to 2 times - o 1 volume of resin – 4 volumes of water: no expansion – The less water is used, the higher expansion volume of the material – The more water is used, the denser the compound (we recommend a maximum up to 4 times the amount of resin) • The material can be injected directly in the structure using 1 component pump, as long as there is sufficient water present in the structure. Moreover, it can be injected using a 2-component pump whereby the second component is water • Non-toxic: does not contain solvents • Non-flammable • Excellent adhesion on mineral building materials such as concrete, cement, and brick.
Properties	
Color	Yellow
Viscosity (20 °C)	550 mPa.s
Density (20 °C)	1.1 g/cm ³
Flash point	>148 °C
Storage temperature	Between 10 °C and 30 °C
Min. application temp	5 °C (lower is possible with adapted technique)
Expansion Volume	Depending on the volume of water
Reaction times: 1 volume of resin – 1 volume of water (25 °C)	Start: 20 sec End: 3 min 05 sec

Surface 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 Prokem Technical office for more information or the specific application manuals of the injection techniques
Mixing	• Due to the fact that Keminject PU 200 is a pre-catalyzed resin, and is therefore ready to use. Pour the mixture in a bucket • Depending on the ambient and structure temperature, the reaction times will vary (check technical data, Reaction times). The higher the temperature, the quicker the reaction time • As this material is a pre-catalyzed, the reaction time can be altered by using a heat mantle
Application	• Option 1: • The material can be injected directly into the structure, by using a 1- component pump. The resin will react with the water in the structure and will react • Option 2: • The material can be injected directly into the structure in combination with water, by using a 2- component pump. This procedure is recommended if you are not sure that sufficient water will be present in the structure and that thorough hydration can take place. Enough water ensures a good reaction of the resin • 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
Packaging	• 20 kg plastic jerry can • 1000 kg IBC.
Shelf Life & Storage	Keminject PU 200 has a shelf life of 12 months in the original, unopened, and undamaged packaging
Cleaning	If the components are liquid, the pump can be cleaned with Special Solvent. 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 Special Solvent, which is a cleaner with high flash point. Hardened material needs to be cleaned with Special Solvent Packers can be removed, and the boreholes can be sealed with a fast-setting mortar
Health and Safety	• Confined area must be well ventilated and no naked flame allow • Contact with the skin should be avoided as certain sensitive skins may be attacked by contact with the resin occurs, the skin should be washed immediately with soap and water-not solvent • Use goggles- gloves and a breathing mask when applying • Eye splashes are to be washed with plenty of water • If ingested seek medical advice

**Additional
Information**

PROKEM provides the construction industry with a comprehensive range of construction chemicals and specialty products answering the queries of modern engineers for trouble free durable structure

PROKEM designs tailor made products should there be critical application that requires specific properties rather than our main range. For our customer's satisfaction

PROKEM reserves the right to change the properties of its products

All orders are accepted subject to our current term of sale & delivery

Users must always refer to the most recent issue of the local product data sheet for the product concerned, copies of which will be supplied on request

PROKEM extends technical services to include after-sales support to assist users in the proper handling of our products