

REC PU INJECTION 011

FOAM-FORMING WATER-SEALING POLYURETHANE INJECTION

DESCRIPTION

REC PU INJECTION 011 is a low-viscosity, water-reactive polyurethane injection resin based on MDI technology. The product consists of a resin component and a catalyst. When **REC PU INJECTION 011** comes into contact with water, it reacts and forms carbon dioxide gas, causing the resin to expand into a rigid, hydrophobic polyurethane foam. The resulting foam penetrates and fills cracks, voids and cavities, forming a water-resistant seal. The reaction speed can be controlled by varying the amount of catalyst. The product is particularly suitable for stopping active water leakage and sealing cracks and gaps where a rigid, non-flexible injection foam is required.

FEATURES AND BENEFITS

- Low viscosity for penetration into fine cracks.
- Water-reactive polyurethane injection resin.
- Forms a rigid hydrophobic polyurethane foam.
- Suitable for active water leakage.
- Fast reaction and foaming.
- Reaction speed adjustable through catalyst dosage.
- High free expansion.
- Does not shrink after curing.
- Excellent adhesion to mineral construction materials.
- Suitable for concrete, cement and brick substrates.
- Adhesion to metal and certain plastics.
- Suitable for cracks, voids and larger gaps.
- Resistant to water and groundwater.
- Resistant to many chemicals such as weak acids, alkalis, mineral oils, fungus and bacteria.
- Resistant to seawater and petroleum product.

PRIMARY APPLICATIONS

REC PU INJECTION 011 is suitable for:

- Water sealing of leaking cracks.
- Sealing of construction joints.
- Sealing of large cracks and gaps.
- Active water leakage.
- Concrete walls and floors.
- Concrete structures.
- Underground structures.
- Areas exposed to high hydrostatic pressure.
- Water penetration through cracks and voids.
- Injection through mechanical injection packers.

NOTE: **REC PU INJECTION 011** is intended for rigid or relatively stable cracks and joints. It should not be selected as the primary sealant for cracks or joints that are expected to undergo significant recurring movement. For moving cracks, a flexible polyurethane injection resin such as **REC PU INJECTION 011** is generally more appropriate.

TECHNICAL INFORMATION

Physical State	Liquid	
Color	Brown	
Viscosity (20°C)	78 mPa·s	
Resin Density	1.10–1.20 kg/L	
Mixing Ratio (A:B)	2:1	
Viscosity at 25°C	Resin	Part B
	111 mPa·s	36 mPa·s

APPLICABLE STANDARDS

REC PU INJECTION 011 complies with BS 6920 – Effect on water quality.

PACKAGING

REC PU INJECTION 011 is supplied as a whole kit containing Resin and catalyst. And any quantity can be provided according to the Client's demand.

INSTRUCTIONS FOR USE

a. PRODUCT PREPARATION

Add the required quantity of **REC PU INJECTION 011** catalyst to the resin. Mix thoroughly to obtain a homogeneous mixture. The catalyst dosage should be selected according to the required reaction speed and prevailing temperature conditions. Higher catalyst concentrations result in a faster reaction.

Important

Because reaction time is strongly influenced by temperature and catalyst concentration, the selected catalyst dosage should be confirmed by a preliminary trial before large-scale injection.

b. INJECTION PROCEDURE

Identify the complete extent of the leaking crack, joint or void. Clean the surface and remove loose material where practical. Install suitable injection bore packers at appropriate spacing. Where necessary, flush the crack with water to remove dust and loose debris. Prepare **REC PU INJECTION 011** with the specified catalyst dosage. Mix thoroughly. Inject the material using a suitable single-component injection pump. Manual, electric or pneumatic pumps may be used where compatible with the product and application conditions. Start injecting from the lowest point of a vertical crack and progress upward. Monitor the appearance and movement of the reacting foam. Continue injection until the crack, void or leakage path has been adequately filled. Allow the material to react and cure. Remove or cut off injection packers as required. Finish the surface using a suitable compatible repair material where required. Due to its low viscosity, the resin can penetrate deeply into suitable cracks and voids before reacting and forming the polyurethane foam.

SHELF LIFE AND STORAGE

REC PU INJECTION 011 has a 12-month shelf life after the production date when stored in the original, unopened and undamaged packaging.

SAFETY PRECAUTIONS

Avoid contact with eyes and prolonged contact with skin. Avoid inhalation of dust during mixing. Always wear suitable protective gloves, eye protection and protective clothing. Use appropriate respiratory protection where dust generation cannot be adequately controlled. Do not eat, drink or smoke while handling the product. Wash hands thoroughly after use. In case of contact with eyes or skin, rinse immediately with plenty of clean water. If accidentally swallowed or if adverse symptoms occur, seek medical attention immediately.

QUALITY STATEMENT

All our products are manufactured to comply with our internal quality management system to ensure consistency and quality.

DISCLAIMER

The technical data presented in this Technical Data Sheet represent the supplied typical product data. Actual performance may vary depending on temperature, moisture availability, substrate condition, crack dimensions and application conditions. The applicator is responsible for determining the suitability of the product for the intended application and for following appropriate application procedures. This Data Sheet version is the latest one. The company may modify it without any prior notice. For more information, please contact the company's head office located in Lahore.

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