



## ***Top Seal PU 900-INJ***

### **Product Description**

A single component, Solvent Free, polyurethane based injection material, specifically designed for sealing and waterproofing the joints and cracks in concrete subjected to structural movements. The single component system reacts with water to form foam that expands filling the void and forming a tight, impermeable elastomeric seal, stopping the water flow.

### **Product uses:**

- Foundations.
- Waste water and sewage systems.
- Waterways, dams.
- Water tanks.
- Parking lots, garages.
- Pools.
- Tunnels, underpasses.
- Drinking water tanks.

### **Advantages:**

- Elastic and fully hydrophobic foam.
- Highly resistant against fungi and other microorganisms.
- Effectively seals joints, cracks and gaps in concrete.
- Single component product - easy to use.
- Low viscosity, even with minimum pressure, penetrates deep into application area.
- Solvent and repellent free.
- Safe to store, carry and use.
- Environment and user friendly; high performance.
- High tensile adhesion.
- Resistant to most organic solvents, mild acids and alkalis.
- Reacts even with seawater or mineral water.
- Shrink free – 100% solid system (solvent free), without shrinkage after curing.
- Compatibility – Compatible with concrete, steel, foils, cable coatings and solvent-free injection materials based on polyurethane or epoxy.
- Toxicity – Fulfills the requirements of contact with drinking water & CFC free hence no air pollution.



## TECHNICAL PROPERTIES

<i>Appearance/Color</i>	Yellowish material
<i>Density:</i>	1.10 ± 0,05 kg/liter )Component A + 1.10 ± 0.02 Component B
<i>Volume solids %:</i>	100 %
<i>Tensile strength:</i>	1.17 MPa (ASTM D-638)
<i>Elongation at break:</i>	400 % (ASTM D-638)
<i>Expansion begin (20° C):</i>	15 sec after water contact
<i>Application Temperature:</i>	+10 °C to +35 °C
<i>Service Temperature:</i>	(-) 40°C / +80°C

## Application Details

<i>Application method:</i>	Single component injection pump
<i>Mixing Ratio:</i>	20 PU Foam Material : 1 Accelerator (By Weight)
<i>Pot life:</i>	30 minutes (20°C/68°F)

## Surface Preparation:

### **Surface Preparation**

- Clean the area to remove dust, oil, and loose particles.
- Drill holes at a 45° angle to intersect the crack or joint halfway through the concrete thickness (e.g., for a 300 mm wall, drill to 150 mm depth).

### **Packer Installation**

- Insert high-pressure steel packers into the drilled holes.
- Use couplers and grease nipple valves for secure hose connections.

### **Material Mixing**

- Add up to 5% accelerator to adjust reaction time based on site conditions.

### **Injection Process**

- Inject the mixed resin using a high-pressure pump.
- Ensure the resin reaches the full depth of the crack or void.
- PU resin reacts with water to expand and form a flexible foam (expansion can reach 20–40 times its original volume).

### **Curing and Monitoring**

- Reaction time varies with temperature:
- At 20°C, expansion starts in ~15 seconds and completes in ~75 seconds.

### Important Remarks:

- Surfaces must have enough structural strength.
- Concrete should have minimum of 25 N/mm<sup>2</sup> compression resistance and minimum 1, 5 N/mm<sup>2</sup> tensile strength.
- Applications below 10°C should be avoided.
- The surface should be protected from moisture and rain for 8-10 hours after application.
- All application tools and equipment should be cleaned with thinner immediately after the use. Cured material can only be removed mechanically.
- Use only where application and drying can proceed at temperatures above: 10°C/50°F. The temperature of paint itself should be 15°C/59°F or above. Apply only on a dry and clean surface with a Temperature above the dew point to avoid condensation. In confined spaces provide adequate ventilation during application and drying.



### ***Shelf life & Storage:***

12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C.

### ***Safety:***

Component A of the product contains isocyanine. Do not smoke during application process and work in a well-ventilated environment away from bare flame. Do not forget that solvents are heavier than air and therefore they accumulate on floor. Wear suitable protective clothing, gloves and eye/ face protection. Adequate ventilation of the working area is recommended.

### ***Legal Notice:***

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