



# ACTFLEX PU200.

Technical Data Sheet

Hydrophobic polyurethane injection

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**ACTFLEX PU200** is a single-component, hydrophobic polyurethane injection resin designed for structural concrete crack sealing and leak remediation. Upon injection, it reacts with water to form a rapid-expanding, closed-cell foam structure, effectively blocking water ingress. This solvent-free formulation emits no harsh odors and exhibits excellent penetration capabilities. It features fast reaction kinetics, ensuring efficient sealing, with no shrinkage or post-application dimensional instability. The cured material maintains high durability and long-term resistance to moisture, making it ideal for applications in below-grade structures, tunnels, basements, and other water-exposed concrete elements.

Injection Grade	Colour	Packaging (Weight)
	Light Brown	20 kg

## ACTFLEX PU200 is suitable for the following applications:

- **Concrete Crack Injection** – Sealing active leaks in structural and non-structural concrete elements.
- **Basements & Underground Structures** – Waterproofing foundations, retaining walls, and basements against water ingress.
- **Tunnels & Infrastructure** – Leak sealing in tunnels, subways, and underground transportation systems.
- **Dams & Reservoirs** – Water containment structures requiring long-term resistance to hydrostatic pressure.
- **Sewage & Water Treatment Plants** – Sealing leaks in wastewater treatment facilities and potable water storage.
- **Bridges & Parking Decks** – Repairing expansion joints and cracks exposed to moisture and environmental stress.
- **Manholes & Utility Vaults** – Preventing water infiltration in below-grade utility infrastructure.

## Advantages

- **One-component PU system** – Easy to apply, no mixing required.
- **Solvent-free** – No strong odor, safe for use in enclosed spaces.
- **Fast reaction** – Expands quickly upon contact with water.
- **High permeability** – Penetrates fine cracks and porous surfaces.
- **No shrinkage** – Maintains stability after curing.
- **Hydrophobic** – Repels water for long-term sealing.
- **Strong adhesion** – Bonds securely to concrete.
- **Chemical resistant** – Withstands harsh environments.
- **Versatile** – Suitable for various waterproofing applications.

## Guidelines

Single component pump: The product may also be applied with single component injection equipment. The presence of sufficient water in the substrate is necessary for the product to form a gel. It may be advisable to introduce water prior to injection. In areas of very little water content and little counter pressure the product may expand to a foam.

## ACTFLEX PU200 Properties

Foaming Magnification	Above 13 Times	Density @ 25%	1.12-1.2
Foaming time	180~360 Seconds	Bond Strength	>2.28 MPa
Elongation Thick Sections	>100%	Application Temperature	>10°C
Elongation Thin Sections	>250%	Viscosity @25%	500-600 MPa

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Ratio* (Between Water:Resin @25°C)	Foaming Magnification	Foaming Time
5:1	600+ sec	8~11
10:1	300-350 sec	16~20
15:1	280-300 sec	13~16
20:1	330-370 sec	10~14

## Application Instructions

### 1. Drilling

- Use a 10mm drill bit to drill holes at ≤200mm intervals.
- Drill at a 45° angle along the crack's edge to a depth of 60–100mm.

### 2. Inserting Packers

- Remove dust from drilled holes.
- Insert 10mm packers, leaving ~20mm clearance from the injection site for easy removal.

### 3. Tightening Packers

- Use a T-handle wrench (10mm) to secure packers firmly.
- Ensure a tight seal to prevent grout leakage.

### 4. Injection Process

- Start injection at one end and progress sequentially:
  - Vertical cracks – Inject from bottom to top.
  - Horizontal cracks – Inject from end points toward the centre.

- Use urethane foam grout, filling  $\frac{2}{3}$  of the injection pump before sealing the lid.

### 5. Injection Technique

- Begin with low pressure.
- Continue injecting until 100mm of material extrudes from both sides of the packer.
- Avoid over-injection; install the next packer before proceeding.

### 6. Removing Packers

- Use a hammer to dislodge packers from the injection site.
- Packers prevent reverse flow, ensuring grout remains sealed within the crack.

### 7. Cleaning Equipment

- For long-term storage, clean the pump with urethane thinner, followed by cleaning oil.
- For short-term reuse, clean with cleaning oil only.
- Fill  $\frac{1}{3}$  of the pump with cleaning oil or engine oil as an alternative.

## Packaging and Storage

### Storage

- Store in a cool, dry place away from direct sunlight.
- Keep sealed containers at temperatures between 5°C and 30°C.
- Avoid exposure to moisture, as the product reacts with water.
- Shelf life: 12 months in unopened packaging under proper storage conditions.

### Cleaning

- After use, flush the injection pump with urethane thinner to remove residual material.
- For long-term storage, follow with cleaning oil to prevent clogging.
- If reusing within a few days, clean with cleaning oil only.
- Fill  $\frac{1}{3}$  of the pump with cleaning oil or use engine oil as an alternative.

## Safety Precautions

ACTFLEX PU200 should be handled with proper protective equipment, including gloves, safety goggles, and a respirator in areas with limited ventilation. Ensure adequate airflow to minimize inhalation risks. In case of skin contact, wash immediately with soap and water, and avoid prolonged exposure. If the product comes into contact with the eyes, rinse thoroughly with clean water for at least 15 minutes and seek medical attention. Inhalation of fumes requires immediate relocation to fresh air, and medical assistance should be sought if breathing difficulties occur. Spills should be contained and

absorbed with inert materials such as sand, preventing entry into drains or waterways. Dispose of all waste and used materials in accordance with local hazardous waste regulations. KEEP OUT OF REACH OF CHILDREN. Uncured product is combustible so keep all sources of ignition away from product and its vapours. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or 0800 764 766 (NZ), or a doctor for advice. IN TRANSPORT EMERGENCY DIAL 000 – POLICE-FIRE BRIGADE. Local regulations as well as health and safety advice on packaging labels must be observed. For more information, please download a copy of the SDS from [www.forspec.com.au](http://www.forspec.com.au)

## Data Sheet

This Technical Data Sheet (TDS) and Material Safety Data Sheet (SDS) are subject to revision as necessary to ensure compliance with relevant Australian Standards and incorporate technological advancements. It is crucial to read the most current versions of the SDS and TDS before use, as application and performance data may be updated. For the latest technical information, please contact Forspec Protective Coatings at (02) 8021 3517 or email [info@forspec.com.au](mailto:info@forspec.com.au) to request a copy. The information provided is representative but does not serve as a comprehensive specification. For specific projects, we recommend consulting directly with the company for tailored specifications.

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