FORSPEC PROTECTIVE COATINGS

# ACTFLEX PU300.


**Technical Data Sheet** Two component Hydrophobic polyurethane injection 22/12/2024

ACTFLEX PU300 is a two-component polyurethane injection resin consisting of a base resin (10 parts) and an accelerator (1 part). This hydrophobic foam urethane system is designed for structural crack sealing and leak prevention, similar to ACTFLEX PU200. The separate accelerator component allows for precise control of reaction time, enabling adjustments based on site conditions such as ambient temperature, water flow rate, and substrate characteristics. This flexibility ensures optimal performance in varying environmental conditions, making it ideal for waterproofing, leak repair, and structural reinforcement applications.

| Injection Grade | Colour | Packaging (Weight) |
|---|---|---|
| | Light Brown | 22 kg set (liquid 20kg, 2kg accelerator) |

## ACTFLEX PU300 is suitable for the following applications:

Sealing leakage in concrete structures, including ceilings, walls, and construction joints.
Basements, tunnels, underground structures, and retaining walls.
Filling voids, cracks, and cavities within concrete to restore structural integrity.

Stopping active water leaks in dams, reservoirs, sewage treatment plants, and pipelines.
Reinforcing and stabilizing soil, rock formations, and foundation structures.
Suitable for both dry and wet conditions, ensuring effective performance in high-moisture environments.

## Advantages

- Effectively seals leakage in ceiling joints, walls, and concrete joints in buildings.
- Expands to fill voids and cavities within concrete structures.
- Provides high-strength adhesion to concrete surfaces.
- Hydrophobic formulation ensures long-term waterproofing performance.
- Adjustable reaction time for site-specific conditions (temperature, water flow).
- Rapid expansion and curing for efficient leak sealing.
- Resistant to chemical exposure and environmental factors.
- Non-shrinking formulation maintains structural integrity over time.

## 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 PU300 Properties

| | | | |
|---|---|---|---|
| **Foaming Magnification** | Above 15 Times | **Density @ 25%** | 1.12-1.2 |
| **Foaming time** | 150~600 Seconds | **Bond Strength** | >2.28 MPa |
| **Elongation Thick Sections** | >100% | **Application Temperature** | >10°C |
| **Elongation Thin Sections** | >250% | **Viscosity (PU300)** | 450-600 MPa |

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# Technical Data

| Ratio*(BetweenLiquid/Accelerator) | Foaming Magnification |
|---|---|
| 2:1 | 150~200 sec |
| 5:1 | 320-340 sec |
| 10:1 | 340-0 sec |
| 15:1 | 330-370 sec |

# Application Instructions

**Drilling**

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

**Inserting Packers**

- Remove dust and debris from the drilled holes.
- Insert 10mm packers, maintaining approximately 20mm clearance from the injection site for easy removal.

**Tightening Packers**

- Secure packers firmly using a 10mm T-handle wrench.
- Ensure a proper seal to prevent leakage during injection.

**Injection Process**

- Mix PU 300 base liquid with the accelerator in the required ratio based on site conditions.
- Start injection at one end and proceed sequentially:
  - **Vertical cracks** – Inject from bottom to top.
  - **Horizontal cracks** – Inject from the end points toward the center.
- Fill two-thirds of the injection pump with the prepared PU 300 mixture and seal the lid.

**Injection Technique**

- Begin injection at low pressure.
- Continue injecting until 100mm of material extrudes from both sides of the packer.
- Avoid excessive injection; install the next packer before proceeding to ensure proper sealing.

**Removing Packers**

- Use a hammer to dislodge packers from the injection site.
- Packers prevent reverse flow, ensuring the injected PU 300 grout remains sealed within the crack.

**Cleaning Equipment**

- For long-term storage, clean the injection pump with urethane thinner, followed by cleaning oil.
- For short-term reuse, clean with cleaning oil only.
- Fill one-third of the pump with cleaning oil or use engine oil as an alternative.
- **If the PU 300 mixture has been sitting in the container or machine for more than 20–30 minutes at 25°C and 50% humidity, the machine must be flushed with cleaning alcohol before restarting the injection process.**

# 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 ⅓ of the pump with cleaning oil or use engine oil as an alternative.

# Safety Precautions

ACTFLEX PU300 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

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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

## 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 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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