



EUCLID CHEMICAL

DURAL 620PU

Flexible Polyurethane Injection Resin for
Permanent Sealing Water Leaks

DESCRIPTION

DURAL 620PU is 2 component low viscosity Polyurethane injection resin, used for grouting, and sealing of water bearing cracks and fissures in concrete and brickworks. The resin is solvent free and starts to react and harden to form a flexible and elastic gel when both components are mixed. In the presence of water, the mixed resin forms a flexible resin seal. DURAL 620PU should be used in conjunction with Dural 6PU to stop the flow of live leaks and then seal the crack.

PRIMARY APPLICATIONS

Dural 620PU is formulated to provide a permanent, flexible seal in water bearing cracks and fissures in concrete, blockwork, and brickwork. This can also be used to seal dry cracks and joints in concrete where movement is expected and used for injecting non-re-injectable hoses used in concrete joints.

FEATURES/BENEFITS

- Excellent adhesion to dry and wet substrate
- Cured resin remains stable and does not shrink over time
- Resistant to high hydrostatic pressure and forms a permanent seal
- Extremely low Viscosity. Ability to penetrate fine cracks under pressure
- Forms a permanent seal which is highly elastic and flexible. Can accommodate movements in concrete
- Remains flexible at extremely low temperatures
- Cured gel is chemically inert and nonhazardous to environment
- Cured gel is non-toxic and can be used in contact with potable water
- The hardened gel/foam remains flexible. Can accommodate movement in concrete
- Form a hydrophobic foam when it meets water in the cracks or fissures to force the water out from the structure

TECHNICAL INFORMATION

Material properties tested under laboratory conditions @ 25°C, 50% RH

| Property | Test Method | Values at 25° C | |
|----------------------|---------------|---------------------------------------|-----------------|
| Components | - | Two (Part A: Base & Part B: Hardener) | |
| Colour & Consistency | - | Part A | Part B |
| | | Transparent liquid | Brown Liquid |
| Odour | - | None | Characteristics |
| Density | EN ISO 2811-1 | 1.0 ± 0.02 g/l | 1.21 ± 0.02 g/l |
| Viscosity | EN ISO 2555 | 300 cPs | 100 cPs |
| Mixed Viscosity | EN ISO 2555 | 200 cPs | |
| Pot Life | ASTM D 7487 | 3 – 4 minutes | |
| Final Cure | - | 24 hours | |
| VOC | - | 10 g/l | |
| Elongation | ASTM D412 | 75 % | |
| Tensile Strength | ASTM D412 | 1.5 N/mm ² | |

| | | | |
|-------------------------|---------|-------------|-----------------------|
| Concrete Bond Strength | EN 1542 | Dry | 0.5 N/mm ² |
| | | Wet | 0.8 N/mm ² |
| Application Temperature | - | 5°C to 45°C | |
| Substrate Temperature | - | 5°C to 45°C | |

Values presented are typical and not necessarily referenced to create specifications.

PACKAGING

DURAL 620PU is supplied in the following packings:

2 Litre kit & 5 Litre kit (1 : 1 ratio by Volume)

SHELF LIFE

12 Months if stored between 15°C to 30°C

DIRECTIONS FOR USE

It is recommended that trained and experienced team conducts the injection grouting. Kindly refer to the detailed Method statement prior to the start of the grouting operation. The Polyurethane resin (Base and Hardener) is supplied separately in vacuum packed canisters. It is recommended that the complete kit is mixed at one time. However, if the grouting operation involves a smaller area, then part mixing may be done. Ensure the volume mixing ratio is maintained for optimum performance.

MIXING:

Pour the hardener (Part B Fully) into the resin (Part A Fully) and mixed thoroughly with a suitable paddle mixer fitted to a proprietary drill. Mix the material for around 3mins till a homogenous consistency is achieved. Ensure that the mixed resin is used within its pot life.

INJECTION PROCESS:

All cracks or joints which requires sealing shall be cleaned of all debris and loose particles. Holes shall be drilled at an angle of 45° on either side of the crack in a Criss cross manner forming a stitch like pattern. The drilled holes should intersect the crack in the middle. Insert superior quality steel packers into the drilled holes and tighten it into place. Use a rapid setting mortar plug to seal all honeycombs in the concrete. Prior to the start of the grouting, the hoses shall be flushed with a cleaning solvent to ensure the removal of any clogged impurity which may remain clogged.

CLEAN-UP

After the completion of the injection process clean the injection hose with the cleaning solvent immediately to flush out all unreacted resin from the hose. Clogged hoses can be removed mechanically only.

PRECAUTIONS / LIMITATIONS

- Component B contains Isocyanate. Therefore, it is categorized as hazardous when it is in liquid and unmixed state. Proper PPE should be employed during handling.
- Slow setting process. Should not be used to stop flowing water. Recommended to use after DURAL 619 PU (fast foaming PU resin) has been injected to stop the water.
- Unused or partially mixed materials shall be disposed of as per the disposal procedures for hazardous materials, for further information please refer to the actual Material Safety Data Sheet.

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