



DURAL 619PU

PUR Injection Foam for Temporarily Stopping Live Water Leaks

DESCRIPTION

DURAL 619PU is 2 component low viscosity, solvent free water reactive fast foaming polyurethane injection resin. The product consisting of a base (Part A) and a Catalyst (Part B), reacts with water to form a rapidly expanding dense and flexible foam to immediately stop the ingress of flowing water through a concrete crack in any other or tunnel construction. Increasing the dosage of the catalyst by 10% will reduce the pot life.

PRIMARY APPLICATIONS

Dural 619PU has been designed for immediate stoppage of flowing water from concrete cracks or joints and forming a temporary seal prior to the injection of permanent polyurethane. Also used to fill in cavities in brickwork and concrete.

FEATURES / BENEFITS

- Cured foam remains stable
- Resistant to high hydrostatic pressure
- Pot life can be reduced by increasing the dosage of the catalyst
- Foaming reaction starts only when the mixed resin is in contact with water. Unreacted mixed resin will have a pot life of around 6-8 hours ensuring low wastage of mixed materials
- Excellent adhesion to wet substrate
- Rapid expanding foam with a dense cell structure
- Cured foam is non-toxic and can be used in contact with potable water

TECHNICAL INFORMATION

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Property	Part A	Value	Part B
Colour & Consistency	Brown Liquid		Amber Liquid
Odour	Characteristic		Like Amine
Density @25°, (g/l) EN ISO 2811-1	1.15±0.02		0.9±0.02
Viscosity @25°C, (mPas) EN ISO 2555	230±5		15±5
Start of Expansion, (secs)	8-10 (after contact with water)		
Pot Life of mixed materials (Before contact with water), (Hrs)	6-8		
VOC, (g/L)	≤ 10		
Free Foam Expansion	Up to 50 times		
Elongation, (%) ASTM D 638	≥15		
Ambient Temperature, (°C)	5 to 45		
Substrate Temperature, (°C)	5 to 45		

All values given are subject to 5-10% balance

Tested at 25°C and 50% RH with 10% water	0% Cat	5% Cat	10% Cat	Test Standard
Cream time (start of foaming), (secs)	20	12	8	ASTM D 7487
Free rise time (end of foaming), (secs)	190	45	25	ASTM D 7487
Volumetric expansion factor	54	64	75	ASTM C 1643

SHELF LIFE

1 Year in original, unopened container when stored in dry conditions. High relative humidity will reduce the shelf life.

PACKAGING / YIELD

DURAL 619PU is supplied in the following packings:

1 Litre Kit

Part A (Resin) : 0.9 litre

Part B (Catalyst) : 0.1 litre

APPLICATION INSTRUCTION:

DIRECTIONS FOR USE

It is recommended that the injection grouting is carried out by trained and experienced team. Kindly refer to the detailed Method statement prior to the start of the grouting operation.

The Polyurethane resin (Base and Catalyst) are supplied 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 a smaller kit may be used.

INJECTION PROCESS:

All cracks or joints which require 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 good 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 impurity which may remain clogged.

MIXING:

Pour the required amount of catalyst (Part B) into the base (Part A) canister 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 (6 to 8 hours).

INJECTION PROCESS:

Pour the required amount of the mixed resin into the injection pump's feed container. Start the injection grouting process maintaining a steady pressure of 2 to 3 bar and increasing up to a maximum of 4bar. Start the injection process from the lower end or from one end and continue till the end of the crack or till the water stops flowing out from the crack.

CLEANING:

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.

LIMITATIONS:

- This product is not suitable for use in injection hose systems.
- Product contains Isocyanate. Proper PPE should be worn during application.
- Due to its sensitivity to water and moisture, all tools and equipment's shall be kept dry.
- DURAL 619PU is used for the temporary sealing of flowing water. Other permanent PU injection resins is required to be used for permanent sealing of the crack.

- Unused or partially mixed materials shall be disposed off as per the disposal procedures for hazardous materials

STORAGE:

DURAL 619PU should be stored in a dry and cool place. In hot climatic regions, it is recommended to store the material in air-conditioned environment. The shelf life and performance of the product could get affected if the products are stored below 5°C and above 35°C temperatures.

HEALTH AND SAFETY:

DURAL 619PU contains Isocyanate. Proper PPE and safety glasses shall be worn during handling and application of the product. The injection grouting shall be carried out by experienced personnel. Improper use of the product can be potentially hazardous.

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Feb 2024 R1

(DURAL 619PU)

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