

## UNIVERSAL RESIN

### *Semi-Rigid Water-Reactive Polyurethane*



UNIVERSAL RESIN is used to stop water inflows through leaking concrete construction joints in an underground mine shaft.

#### Description

UNIVERSAL RESIN is a low-viscosity polyurethane resin designed for single-component injection. It penetrates fine cracks in rock and concrete, and reacts with water to form a semi-rigid, foam barrier.

Once cured, the hydrophobic seal repels water, will not shrink or expand, and serves as a long-term solution to water infiltration.

#### Advantages

- Stops high-pressure inflows
- Will not shrink or expand after curing
- Accelerator to control reaction time
- Resistant to corrosive environments and temperature fluctuations
- Solvent-free and non-toxic

#### Where to Use

**Application** – UNIVERSAL RESIN is suitable for water cut-off applications in underground mines, rock fissures, tunnels, subways, buried chambers, large hydroelectric dams, and deep excavation sites.

**Substrate** – concrete, rock

#### How to Use

**Preparation** – Drill injection holes to intersect the joint. Flush drill holes to remove drilling dust and debris before installing packers. Select appropriate accelerator ratio and verify that the resulting cure time conforms to project specifications and requirements. Use as low as 1% accelerator dosage for slow reaction time or as much as 10% for fast reaction time.

**Application** – Wipe resin containers to avoid contamination by moisture. At a dry location, pre-mix UNIVERSAL RESIN and desired ratio of accelerator. Mix thoroughly until blended without entraining air. If necessary, pre-flush the injection site so enough water is present to activate the resin. Inject using a single-component injection pump. Use separate pumps for resin and water.

**Clean Up** – Flush pump, hoses and injection accessories with PUMP CLEANER.

#### Technical Data

Component -	RESIN	ACCELERATOR
Density (20°C) -	1.15	0.995
Viscosity -	100 cps	25 cps
Mixing Ratio -	1% - 10%	
Colour -	Brown	Clear to light yellow
Physical State -	Liquid	Liquid
Shelf Life -	12 mos.	12 mos.
Packaging -	20 kg pails	2 kg bottles

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#### Limitations

- Reaction occurs with any moisture present
- Reaction times increase as ambient temperature decreases
- Reduction to shelf life after product is opened

#### Caution

Wipe resin containers to avoid contamination by moisture. Keep container closed when not pouring. Beware of pressure build-up in closed container. Use only in adequate ventilation. Prevent contact with eyes, skin and clothing. Avoid breathing vapours. Do not ingest. Wear appropriate PPE including impermeable gloves and safety glasses.

#### First Aid

For eye contact: flush with water; if irritation occurs: seek medical attention. For skin contact: wash with soap and water; if irritation occurs: seek medical attention. For inhalation: move to fresh air; if difficult breathing occurs: seek medical attention. For ingestion: seek medical attention; drink water; do not induce vomiting. Refer to MSDS for more information.

#### Related Products

Universal Accelerator, Pump Cleaner, Packers, Hydraulic Couplers, Injection Pumps

#### Related Literature

Polyurethane Injection Products, MSDS

#### Company Overview

Multiurethanes offers technical grouting services for water cut-off, soil stabilization and void filling applications for the same industries that you service; mining, heavy civil, tunneling and utilities. Our services include: engineering, technical support, materials, and equipment.

#### Technical Service

For additional information, please contact us: 1-800-663-6633 / [info@multiurethanes.com](mailto:info@multiurethanes.com)

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UNIVERSAL RESIN is used to stop water inflow problems for tunneling contractors.