

High Strength Polyurethane Foam Injection System



REZOLUTION MINING POLYMERS

Ground Bond High Strength Polyurethane Foam Injection System

DESCRIPTION

ReZolution Ground Bond is a highly reactive, solvent free, hydrophilic, 2-component, high strength polyurethane foam injection system. It is rapid setting and has a foam expansion factor of 3, making this an ideal product for rapid ground and strata stabilization. The system contains fire retardants and is self-extinguishing.

USES

- Filling and stabilizing cavities in coal seams
- Filling and stabilizing cavities in fractured rock eg roadways, shafts etc.
- Consolidating other substrates such as sand and gravel
- Sealing gas and semi-static water

FEATURES

- A fast reacting polymer with strength and resiliency
- Utilizes foaming agents with Zero ODP and Zero GWP
- It is a two component system, with both components mixed in equal volume proportions (1:1 by volume) using a two-component injection pump coupled with a static in-line mixer.
- Foam expansion of 3 times without reaction with ground water, and up to 8 times when in contact with and mixing with water.
- Will penetrate cracks greater than 0.15mm.
- For water stopping it is recommended to use **ReZolution Aqua Stop**.

PRODUCT DATA

	Ground Bond Part A	Ground Bond Part B
Appearance	Opaque liquid	Brown liquid
Viscosity (20°C)	400 cps	200 cps
Density (20°C)	1.04 g/ml	1.24 g/ml
Flash point	> 200°C	> 200°C

TECHNICAL AND PROCESSING DATA

Mix Ratio	1A:1B parts by volume
Onset of foaming	~ 40 seconds
Foaming stops after	~ 70 seconds
Foam expansion factor	~ 3 times
Foam Density	~ 300 kg/m ³
Foam Stability	No shrinkage
Flexural adhesive strength	~ 4 MPa
Border time	~ 30 minutes (time to reach 1 MPa adhesive strength)

Please note that the above figures are those measured in the Polymer Group Ltd laboratory. Conditions in the mine may influence these results.

ReZolution Ground Bond

CLEANING INJECTION EQUIPMENT

For short breaks, pump only Ground Bond Part A through the mixer.
For long breaks (eg storage, or after job is complete) pump clean water through Part A pump/injection lines; and pump clean engine oil through Part B pump/injection lines.

SAFETY PRECAUTIONS

Please refer to the Material Safety Data Sheets for full details. Although **ReZolution Ground Bond** contains isocyanates, the cured product is inert.

Nevertheless, only experienced operators should mix and install this product.

Wear appropriate PPE and avoid contact with skin and eyes.

Mop up any spills with absorbent materials such as zeolite or sand, and dispose of in accordance with local regulations. Prevent unreacted product from entering drains.

STORAGE

12 months if stored in dry, unopened containers within temperature range +5° to +35°C.
Beware of frost sensitivity for **Part A**.

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ReZolution Mining Polymers, a division of Polymer Group Ltd was established in 2013 with the goal of developing a high-performance range of mining industry strata reinforcing and strata control materials.

The technical group associated with ReZolution Mining Polymers comprises research and development chemists, experienced mining industry personnel, together with construction industry applicators.

Polymer Group Ltd is seeking world-wide representation through regional distributors who are experienced in supply to construction (tunneling and related infrastructure activities) mining material suppliers and geothermal/ground control professionals and contractors.



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