

LOCKWELL STRATUM BOND

Fire Resistant and Rapid Setting Strata Stabilization Polyurethane Injection System

Product Description

Lockwell StratUM Bond is a two component (1:1 by volume) fire resistant injection system using a two-component injection pump coupled with a static in-line mixer head; based on urea silicate technology. It is designed to rapidly stabilize strata and coal by giving them structural strength and flexibility.

In addition to being fire resistant due to its unique silicate chemistry, the maximum exotherm reached during crosslinking is well under the maximum 150°C allowed as specified by the NSW Government Trade and Investment Mine Safety Guideline MDG 3608 August 2012, Appendix D1-TM003.

Features & Benefits

- Fire resistant due to its unique silicate chemistry
- Very fast reactivity with structural strength and resiliency
- Suitable exothermic behavior for use in coal mines.
- Same reaction and cured properties in dry or underwater situations
- Penetrates cracks greater than 0.15mm
- Does not expand its cured volume. Does not absorb water
- Very good adhesion to wet surfaces

Application Area

- Rapid stabilization and strengthening strata and coal
- Rapid consolidation of other substrates such as sand, gravel, fractured road rock etc.
- Crack repairs above and below water

Technical and Processing Data

Mix Ratio	1A:1B parts by volume
Workability Time (25°C)	2.5 minutes from mixing
Workability Time (40°C)	1.0 minutes from mixing
Exothermic Cure	Starts after 4 minutes
Border time (time to reach 1 Mpa adhesive strength, 25C)	5 minutes
Maximum bond to substrate	Attained within 2 hours
Compressive strength after 1 hour	30 Mpa
Compressive strength after 24 hour	45 Mpa
Compressive strength after 7 days	> 50 Mpa

Please note that the above figures are those measured in a controlled laboratory environment. Conditions on sites may influence these results however with correct handling and use, this would be minimal.

Product Data

	Lockwell StratumBond Part A	Lockwell StratumBond Part B
Appearance	Opaque liquid	Brown liquid
Viscosity (20°C)	400 cps	200 cps
Density (20°C)	1.48 g/ml	1.24 g/ml
Flash point	Not Applicable	> 200°C

Lockwell Stratum Bond 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 head.

Cleaning of Injection Equipment

For short breaks, pump only Part A through the mixer. For long breaks (e.g. storage, or after works complete) pump clean water through Part A pump / injection lines and pump clean engine oil through Part B pump / injection lines.

Storage

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

LOCKWELL STRATUM BOND

Safety Precautions

Please refer to the Material Safety Data Sheets for full details. Although Lockwell Stratum Bond contains isocyanates, the cured foam is inert. Nevertheless, it is recommended that only experienced operators mix and spray 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.

Additional Information - Disclaimer

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products with regard to the required processes and applications. This data sheet is provided free of charge and we do not accept any liability with regard to the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention.