



## Strata & Foundation Stabilization Injection System

### Product Description

ShieldMining™ Strata Bond is a two component, 1:1 by volume, fire resistant injection system based on urea silicate technology. Using a two-component injection pump coupled with a static in-line mixer head it is designed to rapidly stabilize strata and coal by imparting structural strength and flexibility. ShieldMining™ Strata Bond can be used in wet environments where it exhibits good adhesion to wet surfaces but will not absorb water.

In addition to being fire resistant owing to its unique silicate chemistry, the maximum exotherm reached during cross linking 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.

### Uses

- ✓ 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.

### Features

- ✓ Fire resistant.
- ✓ Very fast reactivity imparting structural strength and resiliency.
- ✓ Suitable exothermic behaviour for use in coal mines.
- ✓ Similar 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.

### Product Data

|                         | STRATA BOND PART A | STRATA BOND PART B |
|-------------------------|--------------------|--------------------|
| <b>Appearance</b>       | Opaque liquid      | Brown liquid       |
| <b>Viscosity (20°C)</b> | 700-900 cps        | 200 cps            |
| <b>Density (20°C)</b>   | 1.51 g/ml          | 1.24 g/ml          |
| <b>Flash Point</b>      | Not Applicable     | > 200°C            |

### Technical Data

|   |  |
|---|--|
| Gel Time (25°C)                         | Approximately 2.5 minutes from mixing                            |
| Exothermic Cure                         | Starts after 4 minutes   |
| Border Time (time to reach 1 Mpa, 25°C) | 5 minutes  |
| Compressive Strength                    | @ 1 hour: ~ 30 MPa<br>@ 24 hours: ~ 45 MPa<br>@ 7 days: > 50 MPa |
| Maximum bond to substrate               | Attained within 2 hours  |
| 24-hour Compressive Strength            | > 30 MPa   |
| 7-day Compressive Strength              | Typically 38 MPa   |

Please note that the above figures are those measured in the ShieldCrete® International laboratory. Conditions in the mine may influence these results.

### Cleaning Injection Equipment

For short breaks, pump only Part A through the mixer.

For long breaks (e.g., 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 ShieldMining™ Strata Bond contains isocyanates the cured product is harmless.

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.

### Technical Support

For technical support, please you may send an email to mail@shieldcreteinternational.com.

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