



## BAGGED SHOTCRETE

[www.thiessenteam.com](http://www.thiessenteam.com)

### Bagged Shotcrete

Our sands and aggregates are thoroughly dried, then mixed with powders and admixtures in precise quantities to accurately formulate the required shotcrete mix design. This dry pre-blended mixture is then placed in reinforced 1 cubic yard or ½ cubic yard bags and wrapped in waterproofing plastic to protect against moisture absorption. The bagged shotcrete is then placed on pallets for easy transportation to the job site.

Thiessen Team produces two base mix designs for shotcrete application, and can be customized to meet your requirements:

### Ultra-Stick Shotcrete – Dry Application

#### Description

Ultra-Stick Shotcrete dry is a pre-blended, accelerated dry shotcrete containing carefully selected components. Ultra-Stick Shotcrete has greatly enhanced shooting characteristics and physical properties.



Shotcrete / Concrete Products

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### Uses

In the dry process, Ultra-Stick Shotcrete is pneumatically conveyed dry or predampened through an Aliva dry machine or a Thiessen Team Predampener and water is added at the nozzle. The shotcrete impacts the surface at high velocity resulting in a well compacted, high quality shotcrete with excellent bond. Some common uses include:

- Slope stabilization
- Initial and secondary tunnel support
- Structural linings
- Concrete rehabilitation

Ultra-Stick Shotcrete Dry may be used in combination with steel or poly fiber reinforcement (in super sacks only) to enhance load carrying capacity and with non-caustic shotcrete accelerators to provide high strengths and fast set times. It can be blended to meet ACI 506 gradation #1 or #2.

### Advantages

Stickiness: Bagged Ultra-Stick Shotcrete has vastly improved cohesion characteristics compared to conventional shotcrete. This stickiness saves time and money because:

- Sagging and sloughing are eliminated
- Thick layers can be applied in a single pass in both the vertical and overhead orientations. This increase shooting efficiency. Passing over work two or three times to achieve a certain thickness is no longer required
- Bagged product has the admixtures including fiber already in the mix.
- Ultra-Stick Dry Application requires lower equipment start-up costs.



| Technical Data                         | Test Method               | MPa                          | PSI  |
|--|---------------------------|------------------------------|--|
| Test                                   | CAN3-A23-1 4C<br>ASTM C42 |                              |  |
| Compressive Strengths                  |                           |                              |  |
| 1 Day                                  |                           | 17                           | 2,500  |
| 7 Day                                  |                           | 28                           | 4,000  |
| 28 Day                                 |                           | 41.5                         | 6,000  |
| First Crack Flexural Strength          | ASTM 1018                 | 6.8                          | 986  |
| Boiled Absorption                      | ASTM C842                 | 5%                           |  |
| Volume of Permeable Voids              | ASTM C842                 | 14%                          |  |
| Toughness (10lbs.GSF/yd <sup>3</sup> ) | ASTM 1018                 | I - 5 4.2<br>I - 105.6       |  |
| Set Times                              | ASTM C403                 |                              | Initial set 10 minutes<br>Final set 15 minutes |
| (3% accelerator)                       |                           |                              |  |
| Freeze / Thaw Resistance               | ASTM C555                 |                              |  |
| 95%                                    | Acceptable 80%            |                              | Ultra-Stick Shotcrete                          |
| Rebound                                | Consultant's Test         | Vertical 12%<br>Overhead 20% |  |

