



## DESIGNATION

Dry expanding mix StrongRockMass is created for strengthening the rock mass by flooding it. The mix is impalpable and when mixed with water creates a solution with good pumpability and rock crack penetration.

The solution, obtained from the mix of StrongRockMass, has a good adhesion, controlled by setting time and expands during solidification.

Waterproofing is ensured by sealing the fractures in rock mass.

Used for strengthening rock mass in mining, as well as in the construction and, road and rail tunnels repairs.

## SPECIFICATION

Dry expanding mix for rock mass hardening and waterproofing StrongRockMass is a polymer-mineral fine-grained mixture obtained by intensive mixing of small-size coarse aggregate and several types of binder and complex of modifying additives.

## KEY BENEFITS

- Secure strengthens of the rock mass
- Cost effective
- Due to high plasticity and small fraction of the filler, it perfectly penetrates the cracks with minimal expansion

## Technical Description

### MIX APPLICATION

The amount of water, necessary for preparation of the expanding, hardening and waterproofing mix StrongRockMass is determined by the ratio of 0.75-0.85L per 1 kg of dry mix. The temperature of the water used for the dry mix should be not less than +10°C and not more than +25°C. A grouting complex consisting of a blending machine and a pump must be used to inject the resulting solution.

The grouting complex shall ensure the continuous supply of the finished solution by pipeline under pressure to the work place. The hardening of rock mass is carried out according to the following pattern:

1. Drilling of shot holes. The number, length and diameter of the shot holes are determined after the rock mass survey is conducted.

2. Injection. A reusable dock is set in the well, to which the pressure sleeve is connected from the grouting complex. The sleeve length should not exceed 150 m. The degree of injection is determined by a pressure manometer at the grouting complex, by reference wells or by loose returns of solution to the mining (driftage). After a complete injection of the wells, injection is made into the next well. As the solution solidifies, the dock is extracted and installed into the next well.

Temperature of working surface and ambient air temperature should be not less than +5°C and not more than 30°C. The rock mass consolidation works must be run according to the requirements of "Application of dry expanding mix for consolidation and waterproofing of rock mass StrongRockMass» document.

### TECHNICAL SPECIFICATION

Binding Base	portland cement
Fraction of aggregate	up to 0,2 mm
Water consumption for mix preparation	0.75-0.85L of 1 kg mix
Temperature of working surface	from +5°C to +30°C
Water temperature	from +10°C to +25°C
Time of loss of fluidity	no more than 60 min
Maximum length of pressure sleeves	150 m
Compression resistance after 28 day storage	not less than 10 MPa
Material expansion coefficient, %	1-3%

### DRY MIX CONSUMPTION

To prepare 1 m<sup>3</sup> of solution 850-950 kg dry mix is required.

### PACKAGE TYPE

Comes in 3-layered paper valve bags with polyethylene liner weighing 25 kg (±0.5 kg).

### SAFETY

Avoid contacting the mortar with the skin and mucous membranes. If contact occurs - rise with clean running water.

### STORAGE SHELF LIFE

Store mix in a dry place with relative humidity of 60%, temperature from -50°C up to +50°C. Storage period in the manufacturer's packaging is 12 months from the date of manufacture.

The provided information is based on our experience and present knowledge. For more information please contact to a manufacturer's representative.