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MultiGrout CB

Resistant to Water Washout

Description

MultiGrout CB is an un-sanded, cement-based expanding grout containing silica fume (microsilica) and other carefully selected additives. MultiGrout CB gains strength quickly and resists water washout, making it ideal for anchoring tendons, cables and bolts into soil or rock media.

Uses

- MultiGrout CB can be used for most grouted anchor requirements, including:
- Earth tiebacks for excavation and slope stabilization.
- Rock bolts or soil anchors in tunnel support systems.
- Cable bolting.
- Oil or rock tendons used for anchoring piles or foundation structures. Infill of pipe piles.

Advantages

- **High early strength:** MultiGrout CB has superior early strength gain compared to Type 30 grouts, allowing early tensioning of anchors. It has comparable strength gain to high alumina grouts, but does not experience strength regression.
- **Resistance to water washout:** MultiGrout CB has excellent cohesive properties. It resists washout or dilution by water and thus can be used in wet ground conditions and still retain its excellent physical properties.
- **Reduced Grout Takes:** MultiGrout CB has thixotropic properties. It tends to get after placement or pumping. This gelling action prevents the loss of grout in porous or fractured geology.
- **Cold weather Performance:** When cold weather grouting standards are followed, MultiGrout CB can achieve excellent physical properties in temperatures down to 5°C (41°F).

Procedures

- Mix MultiGrout CB to the consistency required for placement. MultiGrout CB's thixotropic properties make the grout appear thick and cohesive when in fact it is quite pumpable.

Consistency Recommended Max Water:

Per 30 kg (66 lb)	
Pumpable:	8.2 litres (2.1 US gal)
Flowable:	9.3 litres (2.5 US gal)

Over-watering will result in compressive strengths and inferior physical properties.

- Introduce potable water into a high shear mixer and then add MultiGrout CB while operating at medium speed.
- Mix at high speed for a minimum of five minutes. Ten minutes in mortar style mixers

Technical Data

The data outlined below is representative of typical values achievable under controlled laboratory conditions. Results obtained in the field may vary from those stated.

Typical Properties at Flowable Consistency

(Corps of Engineers CRD-C821 and ASTM Standard C1107 test procedures)

FLOW 22 seconds

EXPANSION, 5 VOLUME:

At 3 and 14 days Not greater than at 28 days
At 28 days 0.4 maximum (0.24 Typical)

SETTING TIME: 15 hours at 20 degrees C

COMPRESSIVE STRENGTH: Mpa (lb/in²)

At 24 hours 13.8 (2000)

At 48 hours 29.5 (4280)

At 7 days 45.7 (6630)

At 28 days 58.9 (8540)

APPROXIMATE YIELD:

AT FLOWABLE CONSISTENCY

Bags per m ³	55
Bags per yd ³	42
Liters/bag	18.4
Ft ³ /bag	0.65

Limitations

Adhering to recommended water additions is very important. Exceeding the maximum recommended water content per sack will result in inferior physical properties.

Packaging

MultiGrout CB is packed in 30 kg (66 lb) polyethylene-lined bags. All MultiGrout CB packaged materials can be custom packaged to meet specific project requirements.

Safety Precautions

MultiGrout CB contains Portland cement and carefully selected additives. Normal safety wear such as dust mask and rubber gloves used to handle conventional cement based products should be worn. Material Safety Data Sheets (MSDS) are available.