



Multi-Grout CB (Cable Bolt)

Technical Data Sheet

Product Description

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

Uses

Multi-Grout 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
- Soil or rock tendons used for anchoring piles or foundation structures. Infill of pipe piles

Advantages

High Early Strength – Multi-Grout 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 – Multi-Grout 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 physical properties.

Reduced Grout Times – Multi-Grout CB has thixotropic properties. It tends to gel after placement or pumping. This gelling action prevents the loss of grout in porous or fractured geology.

Positive Expansion – Multi-Grout CB's positive expansion ensures contact between host material and any anchors used to improve ground stability.

Consistency

Recommended Water Quantity/30 kg Bag

Pumpable	0.33 WCM	6.6 Litres	(1.7 US GAL)
Flowable	0.4 WCM	8.0 Litres	(2.1 US GAL)

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

Application

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

Step 1 – Introduce potable water into a high shear mixer and then add Multi-Grout CB while operating at medium speed

Step 2 – Mix at high speed for a minimum of 5 minutes. 10 minutes in mortar style mixers.

Limitations

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



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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 of Flowable Consistency

(Corps of Engineers CRD-C821 and ASTM C1107)

Flow:	22 Seconds
Expansion % Volume: (At 3 & 14 Days / 28 Days)	Not greater than at 28 days – 0.4 maximum (0.24 typical)
Setting Time:	15 hours at 20°C

Compressive Strength – MPa (psi)

	Pumpable	Flowable
At 24 Hours:	49.7 (7208)	40.6 (5888)
At 48 Hours:	59.0 (8557)	48.2 (6990)
At 7 Days:	67.1 (9732)	54.8 (7948)
At 28 Days:	83.1 (12053)	67.9 (9848)

Packaging

Multi-Grout CB is packaged in 20 kg bags. All Multi-Grout CB packaged material can be custom packaged to meet specific project requirements.

Safety Precautions

Multi-Grout CB contains Portland cement and carefully selected additives. Normal safety wear such as dust masks and rubber gloves used to handle conventional cement-based products should be worn. Safety Data Sheets (SDS) are available.