

DESCRIPTION: TENDON ULTRA GROUT is an unsanded, Portland cement based grout containing pozzolans and other carefully selected additives. It is designed to meet the criteria for “Cement Grout for Bonded Tendons” in CSA A 23.1-94 and is available in expanding or non-expanding formulations.

USES: TENDON ULTRA GROUT can be used for most grouted anchor requirements, including:

1. Bonded tendons in post tensioned structures.
2. Cable bolting.
3. Rock bolts or soil anchors in tunnel support systems.
4. Earth tie-backs for excavation or slope stabilization.
5. Soil or rock tendons used for anchoring pile or foundations structures.
6. Infill of pipe piles.

ADVANTAGES:

1. **PUMPABILITY:** TENDON ULTRA GROUT has a carefully balanced admixture package which enhances its pumpability, even through a narrow hose for long distances.
2. **RESISTANCE TO WATER WASHOUT:** TENDON ULTRA GROUT 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.
3. **RANGE OF CONSISTENCIES:** TENDON ULTRA GROUT can have thixotropic properties below a w/c of .25 where it gels after placement or pumping. This gelling action prevents the loss of grout in porous or fractured geology.
4. **EXTENDED WORKING TIME:** TENDON ULTRA GROUT has a longer period of pumpability compared to ordinary grouts. Normal grouts lose pumpability within an hour but TENDON ULTRA GROUT can retain pumpability up to 3 hours.
5. **HIGH STRENGTH:** TENDON ULTRA GROUT achieves 60 MPa at 28 days.

PROCEDURES:

1. Mix TENDON ULTRA GROUT with a high shear mixer.

<u>CONSISTENCY</u>	<u>W/C</u>	<u>RECOMMENDED MAX. WATER/30 kg (66 lb.)</u>
Flow = 13 - 16 sec.	0.33	9.9 litres (2.6 US gal)

Over-watering will result in reduced compressive strengths and inferior physical properties.
2. Introduce potable water into the colloidal or high shear mixer, then add the TENDON ULTRA GROUT while operating at medium speed.
3. Mix at high speed for three to five minutes. Mortar style mixers are not recommended for this purpose.
4. Decrease mixer speed to low and continue mixing while placing or pumping the grout. The grout's pot life is approximately three hours.

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TECHNICAL DATA:

The data outlined below is representative of typical values achievable under controlled laboratory conditions for the non-expanding formulation of TENDON ULTRA GROUT. Results obtained in the field may vary from those stated.

	<u>Test Method</u>	<u>Flowable</u>
W/C		0.33
Flow	CSA A 23.2-1B	13 - 16 sec.
Expansion	CSA A 23.2-1B	Nil
Bleeding	CSA A 23.2-1B	Nil
Segregation		Nil
Air Content	CSA A 23.2-7C	0.5 %
Density - kg/m ³ (lb/ft ³)		1879 (117)
Yield - m ³ /bag (ft ³ /bag)		0.021 (0.75)
Chlorides	CSA A 23.2-4B	31 mg/kg of grout
Nitrates	ASTM D 4327	73 mg/kg of grout
Compressive Strength: MPa (psi)	CSA A 23.2-1B	
1 - Day		10 (1450)
3 - Day		25 (3625)
7 - Day		50 (7250)
28 - Day		60 (8700)
56 - Day		70 (10150)

LIMITATIONS: Adhering to recommended water additions is very important. Exceeding the maximum recommended water content per sack will result in inferior physical properties. Liability for damages or defective goods shall be limited to the refund of the purchase price or product replacement.

PACKAGING: TENDON ULTRA GROUT is packaged in 30 kg (66 lb.) triple-lined paper bags. All Basalite Dry Mix can be custom packaged to meet specific project requirements.

SAFETY PRECAUTIONS: TENDON ULTRA GROUT contains Portland cement, pozzolans and other carefully selected additives. Normal safety wear such as rubber gloves, dust mask and safety glasses, used to handle conventional cement-based products, should be worn. Material Safety Data Sheets are available on request.

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