

**DESCRIPTION:** TENDON 80 GROUT is an unsanded, Portland cement based grout containing pozzolans and other carefully selected additives. It is designed as per guidelines set out in the Post-Tensioning Institute Guide Specification for Grouting of Post-Tensioned Structures and the 2002 Interim AASHTO LRFD Bridge Construction Specifications.

**USES:** TENDON 80 GROUT can be used for most grouted anchor requirements, including:

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

**ADVANTAGES:** PUMPABILITY: TENDON 80 GROUT has a carefully balanced admixture package which enhances its pumpability.

RESISTANCE TO WATER WASHOUT: TENDON 80 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.

EXTENDED WORKING TIME: TENDON 80 GROUT has a longer period of pumpability compared to ordinary grouts. Normal grouts lose pumpability within an hour but TENDON 80 GROUT can retain pumpability up to 3 hours.

HIGH STRENGTH: TENDON 80 GROUT achieves 80 MPa at 56 days.

VERY LOW PERMEABILITY: TENDON 80 GROUT has very low Chloride Ion Permeability when tested as per ASTM C 1202 (modified).

NO WICK INDUCED BLEEDING: TENDON 80 GROUT exhibits no bleeding when tested according to the ASTM C 940 (modified) test in PTI Guide Specification, a test which measures the bleeding induced in a grout by an ASTM A 416 seven wire strand.

**PROCEDURES:** Mix TENDON 80 GROUT with a high shear mixer.

<u>CONSISTENCY</u>	<u>W/C</u>	<u>RECOMMENDED MAX. WATER/30 kg (66 lb.)</u>
Flow (1 litre) = 13-20 sec. (PTI Guide for Thixotropic Grouts)	0.30	8.95 litres (2.36 US gal))

Over-watering will result in reduced compressive strengths and inferior physical properties. The exact water demand will be affected by the quality of the mixer and site conditions.

Introduce potable water into the colloidal or high shear mixer, and then add the TENDON 80 GROUT while operating at medium speed.

Mix at high speed for three to five minutes. Mortar style mixers are not recommended for this purpose.

Decrease mixer speed to low and continue mixing while placing or pumping the grout. The grout's pot life is approximately three hours.

**TECHNICAL DATA:** The data outlined below is representative of typical values achievable under controlled laboratory conditions for TENDON 80 GROUT. Results obtained in the field may vary from those stated.

	<u>Test Method</u>	<u>Test Result</u>
W/CM		0.30
Flow (1 litre) (PTI Guide)	ASTM C 939 (modified)	13-20 sec. immediately after mixing
Plastic Expansion @ 3 hours	CSA A 23.2-1B ASTM C 940	13-20 sec. @ 30 minutes 0.0%
Plastic Bleeding @ 3 hours	CSA A 23.2-1B ASTM C 940	0.0%
Plastic Segregation @ 3 hours	CSA A 23.2-1B ASTM C 940	0.0%
Wick Induced Bleed Test @ 3 hours (PTI Guide)	ASTM C 940 (modified)	0.0%
Air Content	CSA A 23.2-7C	Maximum 2.0%
Initial Set of Grout	ASTM C 953	Maximum 11 hours
Density-kg/m <sup>3</sup> (lb/ft <sup>3</sup> )		1906 (119)
Yield-m <sup>3</sup> /bag (ft <sup>3</sup> /bag)		0.020 (0.72)
Permeability @ 28 days	ASTM C 1202 (modified)	370 coulombs
Height Change @ 28 days	ASTM C 1090 (modified)	+0.04%

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## TECHNICAL DATA: (CONTINUED)

	<u>Test Method</u>	<u>Test Result</u>
Chlorides Water Soluble Acid Soluble	CSA A 23.2-4B	50 mg/kg of grout 100 mg/kg of grout
Nitrates	ASTM D 4327	1.4 mg/kg of grout
Compressive Strength: MPa (psi)	CSA A 23.2-1B ASTM C 1107	
1-Day		15 (2175)
3-Day		25 (3625)
7-Day		50 (7250)
28-Day		75 (10875)
56-Day		80 (11600)

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

For special projects, TENDON 80 GROUT can be ordered in a formulation which exhibits plastic expansion.

**SAFETY PRECAUTIONS:** TENDON 80 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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Toll Free 800-596-3844



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