

DESCRIPTION: PIER GROUT is an unsanded, cement based, expanding grout containing pozzolans and other carefully selected additives.
The grout is designed for repair or construction of caison/pipe piles.
PIER GROUT may also be used for other grouting applications, including:

1. Rock bolts or soil anchors in tunnel support systems.
2. Earth tie-backs for excavation or slope stabilization.
3. Soil or rock tendons used for anchoring piles or foundation structures.

ADVANTAGES:

1. **PUMPABILITY:** PIER GROUT has a carefully balanced admixture package which enhances its pumpability, even through a narrow hose for long distances.
2. **RESISTANCE TO WATER WASHOUT:** PIER 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:** PIER GROUT can have thixotropic properties at a w/c from .25 to .30 where it gels after placement or pumping. This gelling action prevents the loss of grout in porous or fractured geology.

PROCEDURES:

1. Mix PIER GROUT with a high shear mixer.

<u>CONSISTENCY</u>	<u>W/C</u>	<u>RECOMMENDED MAX. WATER/30 kg (66 lb.)</u>
Flow = 19 - 25 sec.	0.35	10.5 litres (2.8 US gal)
Flow = 26 - 37 sec.	0.30	9.0 litres (2.4 US gal)
Flow = pumpable mortar	0.25	7.2 litres (1.9 US gal)

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

2. Introduce potable water into the high shear mixer, then add the PIER GROUT while operating at medium speed.
3. Mix at high speed for a minimum of 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 one hour.

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.

	<u>Test Method</u>	<u>Flowable</u>
W/C		0.35
Flow	CSA A 23.2-1B	24 sec.
Working Time		1 hour
Expansion	CSA A 23.2-1B	3 %
Bleeding	CSA A 23.2-1B	Nil
Segregation	CSA A 23.2-1B	Nil
Air Content	CSA A 23.2-7C	5 %
Density - kg/m ³ (lb./ft ³)		1767 (110)
Yield - m ³ /bag (ft ³ /bag)		.023 (.82)
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		11 (1595)
3-Day		21 (3045)
7-Day		35 (5075)
28-Day		45 (6525)

LIMITATION: 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: PIER 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: PIER 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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