



FIVE STAR[®] PILE JACKET GROUT

Marine Pile and Column Restoration

PRODUCT DESCRIPTION

Five Star Pile Jacket Grout is a multi-purpose, three component, 100% solids, moisture insensitive epoxy grout specifically designed to cure underwater. Five Star Pile Jacket Grout has excellent flowability and may be pumped or poured into place. Five Star Pile Jacket Grout meets ASTM C 881 Type I, II, IV and V, Grade 2, Classes B and C.

ADVANTAGES

- Low odor
- High strength bonding material
- Moisture insensitive before, during and after cure
- Excellent adhesion to masonry, concrete, wood, steel and most structural materials
- Pumpable

USES

- Encapsulation material
- Corrosion protection for steel
- Structural adhesive
- Gravity fill cracks in horizontal concrete and masonry

TECHNICAL SUPPORT

Five Star Products maintains the industry's foremost Technical Support Group:

- Over 50 years of experience in precision grouting
- Technical Center staffed with field experienced application specialists
- Design-A-Spec[™] for engineering specification assistance
- Experienced representatives for field service
- Corporate research laboratory available to customize products for unique applications

PACKAGING AND YIELD

Five Star Pile Jacket Grout is a three component system consisting of a 3.5 gallon pail containing resin with a two gallon container of hardener and five bags of aggregate. A unit yields approximately 2.0 (56.6 liters) cubic feet of hardened material when using five bags of aggregate. For higher flow, three or four bags of aggregate can be used yielding approximately 1.40 (39.6 liters) or 1.75 (49.6 liters) cubic feet of hardened material, respectively.

SHELF LIFE

Two years in original unopened packaging. Before use and for optimum performance, condition material to between 65°F and 85°F (18°C and 29°C).

TYPICAL PROPERTIES - DRY	
Compressive Strength, ASTM C 109	
1 Day	2250 psi (15.5 MPa)
7 Days	10400 psi (71.1 MPa)
28 Days	11750 psi (81.0 MPa)
TYPICAL PROPERTIES - WET	
1 Day	1200 psi (13.8MPa)
7 Days	5000 psi (55.3 MPa)
28 Days	8880 psi (61.2 MPa)
Tensile Properties, ASTM C 307	
7 Days	1500 psi (10.3 MPa)
Bond to Concrete, ASTM C 882	
7 Days	1500 psi (10.3 MPa)
Linear Shrinkage, ASTM C 531	0.01%
Water Absorption, ASTM C 413	0.0%



The data shown above reflect typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result. Test methods are modified where applicable.

PLACEMENT GUIDELINES

1. **SURFACE PREPARATION:** All surfaces to be in contact with Five Star® Pile Jacket Grout shall be free of oil, grease, laitance, and other contaminants. Concrete must be clean, sound, and roughened to ensure a good bond. An SSPC-SP6 commercial finish on all metal surfaces will optimize bond development to steel.
 2. **MIXING:** For optimum performance, all components should be conditioned to between 65°F and 85°F (18°C and 29°C). Pour all of Component B (hardener) into Component A (resin) of 5 gallon pail. Mix Component A and Component B with a slow speed mixer to avoid air entrapment. Pour mixed liquids into a mortar mixer or suitable mixing hopper. While mixing slowly (20 rpm) add Component C (aggregate) and mix only until the aggregate is completely wet. Add Component C (aggregate) immediately after thoroughly mixing component A (resin) and component B (hardener).
 3. **METHODS OF PLACEMENT:** Five Star Pile Jacket Grout may be pumped or poured into place. For vertical flow applications simply pour or pump from the top of the opening or pump into ports. For horizontal applications, pour or pump from one side to the other.
 4. **POST PLACEMENT PROCEDURES:** In-service operation may begin immediately after minimum required grout strength and modulus have been achieved.
 5. **CLEAN UP:** All tools and equipment may be cleaned with water and a strong detergent solution, or solvent before material hardens. Use powerwasher on pump and mixing equipment. Sand may be used as an abrasive to aid in cleaning.
- NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY.** For more detailed placement procedures, refer to DESIGN-A-SPEC™ or call the Five Star Products Technical Center at (800) 243-2206.

LIMITATIONS

- Minimum application temperature of substrate is 40°F (4°C) and rising. Low temperatures adversely affect flowability and strength gain.
- Do not thin with solvents.
- Cold temperatures lengthen cure time, hot temperatures decrease cure time.
- Maximum operating temperature is 200°F (93°C).

CAUTION

Irritant, toxic, strong sensitizer. Contains epoxy resin and amine. This product may cause skin irritation. Do not inhale vapors. Provide adequate ventilation. Protect against contact with skin and eyes. Wear rubber gloves, long sleeve shirt, goggles with side shields. In case of contact with eyes, flush repeatedly with water and contact a physician. Areas of skin contact should be promptly washed with soap and water. Do not take internally. Keep product out of reach of children. **PRIOR TO USE, REFER TO MATERIAL SAFETY DATA SHEET.**

For worldwide availability, additional product information and technical support, contact your local Five Star distributor, local sales representative, or you may call Five Star's Technical Center at (800) 243-2206.



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Revision Date: 05/08