



**FIVE STAR  
MARINE**

## **PILE JACKET EPOXY GROUT LPL**

Long Pot Life Underwater Epoxy Grout System

### **PRODUCT DESCRIPTION**

Five Star® Pile Jacket Epoxy Grout LPL is a three-component, 100% solids epoxy system specifically designed for underwater grouting and marine pile encapsulation where a longer pot life system is required. Five Star® Pile Jacket Epoxy Grout LPL is a low viscosity resin and hardener system which is mixed with aggregate to encapsulate concrete, timber, or steel pilings in hostile marine environments.

### **ADVANTAGES**

- Pumpable and pourable, with adjustable aggregate
- High strength
- 100% solids, no solvents
- Long pot life for hot weather placement
- Low odor formulation

### **USES**

- Marine Pile repair and restoration when used with Five Star® PileForm™ F Fiberglass Jackets
- Engineered epoxy grouting system offers corrosion protection for concrete, steel and wood marine piles
- Excellent adhesion to masonry, concrete, wood, steel and most marine structural materials

### **PACKAGING AND YIELD**

Five Star® Pile Jacket Epoxy Grout is a three-component system consisting of partially filled containers of resin and hardener, and polyethylene lined bags of sand or aggregate. Product yield is approximately 1.57 cubic feet (44.5 L) with 2.5 bags of aggregate (125 lbs. / 56.7 kg) or approximately 1.85 cubic feet (52.4 L) with 3 bags of aggregate (150 lbs. / 68.0 kg).

### **SHELF LIFE**

Two years in original unopened packaging when stored in dry conditions; high relative humidity will reduce shelf life.

<b>TYPICAL PROPERTIES AT 70°F (21°C)</b>		
<b>Compressive Strength, ASTM C 579 B*</b>	<b>125 lb. Aggregate</b>	<b>150 lb. Aggregate</b>
1 Day	2,000 psi (13.8 MPa)	2,000 psi (13.8 MPa)
7 Days	8,500 psi (58.6 MPa)	8,500 psi (58.6 MPa)
28 Days	9,500 psi (65.5 MPa)	9,500 psi (65.5 MPa)
<b>Tensile Strength, ASTM C 307</b>		
7 Days	2,000 psi (13.8 MPa)	1,800 psi (12.4 MPa)
<b>Bond to Concrete, ASTM C 882</b>		
7 Days	2,200 psi (15.2 MPa)	2,200 psi (15.2 MPa)
<b>Linear Shrinkage, ASTM C 531</b>	0.0%	0.0%
<b>Water Absorption, ASTM C 413</b>	0.0%	0.0%
<b>Flexural Strength, (ASTM C 580)</b>	3,000 psi (20.7 MPa)	3,000 psi (20.7 MPa)
<b>Bond Strength to Steel, (ASTM C 882)</b>	2,000 psi (13.8 MPa)	1,500 psi (10.3 MPa)
<b>Working Time at 70°F (21°C)</b>	90 minutes	90 minutes

\*Materials tested per ASTM C 579 B. Rate of loading 0.25 inches per minute.

Materials tested per ASTM C 579 B. Rate of loading 0.25 inches per minute. The data shown above reflects 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

- SURFACE PREPARATION:** All surfaces to be in contact with Five Star® Pile Jacket Epoxy Grout LPL shall be free of marine growth, oil, grease, laitance, and other contaminants. Concrete must be clean, sound, and roughened to ensure a good bond.
- MIXING:** For optimum performance, all components should be conditioned between 65°F and 85°F (18°C and 29°C) prior to use. Pour all Component B (hardener) into pail containing Component A (resin). Mix thoroughly by hand with a paddle or with a slow speed drill and paddle mixer to avoid air entrapment. Pour mixed liquids into mortar mixer (stationary barrel with moving blades). While mixing, slowly add Component C (aggregate) and mix only until aggregate is completely wet. Add Component C (aggregate) immediately after mixing Component A (resin) and Component B (hardener). Do not mix more material than can be placed in 90 minutes.
- METHODS OF PLACEMENT:** Five Star® Pile Jacket Epoxy Grout LPL 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. A peristaltic pump is required for pumping applications.
- POST PLACEMENT PROCEDURES:** In-service operation may begin immediately after minimum required grout strength and modulus have been achieved.
- CLEAN UP:** Use a solvent or water and strong detergent solution on tools and equipment before material hardens. Use power washer 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 Five Star® Design-A-Spec™ installation guidelines or call Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

## CONSIDERATIONS

- Minimum temperature of substrate is 40°F (4°C) and rising.
- Do not add solvents to increase flowability.
- Minimum age of concrete must be 5 - 7 days, depending on curing and drying conditions.
- Do not seal slabs on grade with product. Five Star® Pile Jacket Epoxy Grout LPL is a vapor barrier.

## CAUTION

Component A - Irritant • Component B - Corrosive

Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves are recommended. Use of a NIOSH/MSHA organic vapor respirator is recommended if ventilation is inadequate. Avoid breathing vapor. Avoid skin contact. **PRIOR TO USE, REFER TO SAFETY DATA SHEET.**

## FIRST AID

**Eye Contact:** Flush immediately with water for at least 15 minutes. Contact Physician immediately. **Respiratory Problems:** Remove person(s) to fresh air. **Skin Contact:** Remove any contaminated clothing. Remove epoxy immediately with a dry cloth or paper towel. Solvents should not be used as they carry irritant into the skin. Wash skin thoroughly with soap and water. Cured epoxy resins are innocuous.

For worldwide availability, additional product information and technical support, contact your local Five Star® distributor, local sales representative, or call Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

SKU / PRODUCT CODE	DESCRIPTION	# UNITS / PALLET	UNIT SIZE
32180	Five Star® Pile Jacket Epoxy Grout LPL System	36 (A) 36 (B) 56 (C)	Resin (A): 28 lbs. (12.7 kg) Hardener (B): 8 lbs. (3.6 kg) Sand Aggregate (C) 3 bags (50 lb. ea.) (22.7 kg)

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Specifications Subject to Change.

For most current version of datasheet, go to [FiveStarProducts.com](http://FiveStarProducts.com)

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