

PRODUCT DATA



UNDERWATER HIGH-STRENGTH GROUT Cementitious Pile Jacket Grout

PRODUCT DESCRIPTION

Five Star Marine Underwater High-Strength Grout is an underwater pump grade, cement-based, non-shrink grout for pile restoration and similar applications. When tested in accordance with ASTM C 827, Five Star Marine Underwater High-Strength Grout exhibits positive expansion for shrink compensation. Five Star Marine Underwater High-Strength Grout meets the performance requirements of ASTM C 1107 and CRD-C 621 specifications for non-shrink grout.

ADVANTAGES

- Placement via tremie, pump or pour
- Salt and seawater resistant
- Contains migrating corrosion inhibitors for superior corrosion resistance
- Non-ferrous, Non-corrosive
- Non-shrink from the time of placement

USES

- Pile repair, rehabilitation and restoration
- Grouting areas subject to freshwater, saltwater or brackish exposure
- Installation of anchors and dowels
- Grouting underwater structures and as a pile jacket fill material

PACKAGING AND YIELD

Five Star Marine Underwater High-Strength Grout is packaged in heavy-duty polyethylene lined bags available in 50 lb. (22.7 kg) units yielding approximately 0.43 cubic feet (12.2 liters) at maximum water. Also available in 3,000 lb. (1,363 kg) bulk bags yielding approximately 25.2 cubic feet.

SHELF LIFE

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

TYPICAL PROPERTIES AT 70°F *	
Compressive Strength, (ASTM C 109)	
1 Day	3500 psi (24.1 MPa)
7 Days	8000 psi (55.2 MPa)
28 Days	8500 psi (58.6 MPa)
Bond Strength, (ASTM C 882)	
28 Days	2000 psi (13.8 MPa)
Modulus of Elasticity, (ASTM C 469)	
	5200 ksi (35.8 GPa) @ 28 Days
Hardened Height Change, (ASTM C 1090)	
	0.0% to 0.3%
Working Time at 70°F (21°C)	
	30 minutes

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

1. **SURFACE PREPARATION:** All surfaces to be in contact with Five Star Marine Underwater High-Strength Grout shall be free of marine growth, oil, grease, laitance, and other contaminants. Concrete must be clean, sound, and roughened to ensure a good bond. For applications where surfaces are not underwater, presoak surfaces with clean water for 8 to 24 hours prior to application.
2. **MIXING:** Mix Five Star Marine Underwater High-Strength Grout thoroughly for approximately four to five minutes to a uniform consistency with a mortar mixer (stationary barrel with moving blades). A drill and paddle mixer is acceptable for single bag mixes. For optimum performance, condition grout to between 60°F and 80°F (15°C and 27°C). Do not exceed maximum recommended amount of mixing water as stated on the package or add an amount that will cause segregation. Do not re-temper mix by adding additional water. Working time is approximately 30 minutes at 70°F (21°C). Follow printed instructions on the package. Always add mixing water first to mixer followed by grout. For large volume placements Five Star Marine Underwater High-Strength Grout may be extended with a clean washed coarse aggregate meeting the requirements of ASTM C 33 and mixed via a volumetric mixer. When mixing via a volumetric mixer, an initial trial mix should be performed to ensure proper

consistency and mixing. Contact StonCor Group for aggregate extension guidelines.

3. **PLACEMENT PROCEDURES:** Five Star Marine Underwater High-Strength Grout may dry packed, poured or pumped into place. For placement thicknesses of less than one inch (25 mm), or greater than six inches (150 mm), call StonCor Group at (800) 263-3112.
4. **POST PLACEMENT PROCEDURES:** Five Star Marine Underwater High-Strength Grout shall be kept continuously wet for three days in tidal zone areas or areas not under water.

NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY. For more detailed placement procedures, refer to Design-A Spec™ installation guidelines or call StonCor Group at 800-263-3112.

CONSIDERATIONS

- If surface temperatures are not between 40°F and 90°F (4°C and 32°C) at time of placement, call StonCor Group at (800) 263.3112.
- Never exceed the maximum water content as stated on the bag or add an amount that will cause segregation.
- Construction practices dictate concrete foundation should achieve its design strength before grouting.

CAUTION

Contains cementitious material and crystalline silica. International Agency for Research on Cancer has determined that there is sufficient evidence for the carcinogenicity of inhaled crystalline silica to humans. Take appropriate measures to avoid breathing dust. Avoid contact with eyes and contact with skin. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes. Immediately call a physician. Wash skin thoroughly after handling. 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 sales representative, or call StonCor Group at (800) 263.3112.

SKU / Product Code	Description	Unit Size
Call	Five Star Marine Underwater High-Strength Grout	50 lb. Bag

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