



CLARIFIER GROUT

Clarifier Overlay Grout

PRODUCT DESCRIPTION

Five Star® Clarifier Grout is a sulfate resistant and moderate heat of hydration, cement-based, nonmetallic grout for supporting machinery requiring precision alignment. Five Star® Clarifier Grout meets the performance requirements of ASTM C1107 and CRD-C 621 specifications for non-shrink grout for Grade A, B and C over a wide temperature range and a long working time.

ADVANTAGES

- Sulfate resistance
- Moderate heat of hydration
- 95% Effective Bearing Area (EBA) is typically achieved following proper grouting procedures
- Formulated with Devoider® for optimum load transfer
- Permanent support for machinery requiring precision alignment
- Does not contain gas generating additives, such as aluminum powder
- Non-shrink from the time of placement

USES

- Clarifier bottoms
- Sulfate resistant overlays
- Patching and repairs
- Support of tanks and vessels
- Repair of concrete in confined areas

PACKAGING AND YIELD

Five Star® Clarifier Grout is packaged in heavy-duty, polyethylene lined bags and is available in 50 lb. (22.7 kg) units yielding approximately 0.45 cubic feet (12.7 liters) of hardened material at maximum water content. Also available in 3,000 lb. (1,363 kg) bulk bags.

SHELF LIFE

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

TYPICAL PROPERTIES AT 73°F (23°C)

Early Height Change, ASTM C 827	0.0 to 4.0%
Hardened Height Change, ASTM C 1090	0.0 to 0.3%
Effective Bearing Area	95%
Bond Strength, ASTM C 882 / 28 Days	2,000 psi (13.8 MPa)
Compressive Strength, ASTM C 109	
1 Day	2,500 psi (17.3 MPa)
7 Days	5,000 psi (35.3 MPa)
28 Days	7,000 psi (48.3 MPa)
Working Time at 73°F (23°C)	45 minutes

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

PLACEMENT GUIDELINES

- SURFACE PREPARATION:** All surfaces in contact with Five Star® Clarifier Grout shall be free of oil, grease laitance and other bond-inhibiting contaminants. Concrete should be mechanically roughened to coarse aggregate exposure to maximize bond. A Concrete Surface Profile (CSP) of 10 in accordance with ICRI Technical Guideline 310.2R-2013 is recommended. Presoak concrete surfaces for 8 to 24 hours, continuously and consistently, via wet rags, wet burlap, ponding or similar method. Minimum ½ inch peak to valley profile.
- MIXING:** Mix Five Star® Clarifier Grout thoroughly for approximately 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 between 60°F and 80°F (15°C and 27°C). Mix Five Star® Clarifier Grout per directions on the packaging. Working time is approximately 45 minutes at 73°F (23°C). Follow printed instructions on the package. Always add mixing water first to mixer followed by grout.
- PLACEMENT PROCEDURES:** Five Star® Clarifier Grout may be poured or pumped into place. For placement thicknesses greater than two inches (50 mm), add clean washed pea gravel. Contact Five Star Products' Engineering and Technical Service Center for further details.
- POST-PLACEMENT PROCEDURES:** Five Star® Clarifier Grout must be flood cured for a minimum of three days. In-service operation may begin immediately after the required grout strength has been reached.

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

- At time of placement, if temperatures of equipment and surfaces are not between 40°F and 90°F (4°C and 32°C), refer to Five Star® Design-A-Spec™ for cold and hot weather grouting procedures or contact Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.
- Substrate shall be free of frost and ice.
- Never exceed the maximum water content stated on the bag.
- Construction practices dictate concrete foundation should achieve its design strength before grouting.
- Cement Based grout should attain a minimum compressive strength of 1,000 psi (6.9 MPa) before being exposed to freezing temperatures.

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 SAFETY DATA SHEET.**

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
20965	Five Star® Clarifier Grout	56	50 lb. (22.7 kg) bag
20950	Five Star® Clarifier Grout - bulk bag	1	3,000 lb (1,363 kg) bulk bag

WARRANTY: "FIVE STAR PRODUCTS, INC. (FSP) PRODUCTS ARE MANUFACTURED TO BE FREE OF MANUFACTURING DEFECTS AND TO MEET FSP'S CURRENT PUBLISHED PHYSICAL PROPERTIES WHEN APPLIED IN ACCORDANCE WITH FSP'S DIRECTIONS AND TESTED IN ACCORDANCE WITH ASTM AND FSP STANDARDS. HOWEVER, SHOULD THERE BE DEFECTS OF MANUFACTURING OF ANY KIND, THE SOLE RIGHT OF THE USER WILL BE TO RETURN ALL MATERIALS ALLEGED TO BE DEFECTIVE, FREIGHT PREPAID TO FSP, FOR REPLACEMENT. THERE ARE NO OTHER WARRANTIES BY FSP OF ANY NATURE WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. FSP SHALL NOT BE LIABLE FOR DAMAGES OF ANY SORT, INCLUDING PUNITIVE, ACTUAL, REMOTE, OR CONSEQUENTIAL DAMAGES, RESULTING FROM ANY CLAIMS OF BREACH OF CONTRACT, BREACH OF ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR FROM ANY OTHER CAUSE WHATSOEVER. FSP SHALL ALSO NOT BE RESPONSIBLE FOR USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT HELD BY OTHERS."

Specifications Subject to Change.
For most current version of datasheet, go to FiveStarProducts.com

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