



FIVE STAR® INSTANT GROUT

Rapid Strength Gain Precision Grout

PRODUCT DESCRIPTION

Five Star Instant Grout is a rapid strength gain, nonmetallic, nonshrink grout for supporting machinery requiring precision alignment and quick turnaround. It is formulated with an advanced technology ideal for cold weather applications, while providing the greatest reliability, and selective chemical resistance. When tested in accordance with ASTM C 827, Five Star Instant Grout shows positive expansion. Five Star Instant Grout meets the performance requirements of ASTM C 1107 and CRD-C 621 specifications for nonshrink grout for Grades A, B and C.

ADVANTAGES

- Superior cold weather performance
- High four hour strength
- Short turnaround time
- Field adjustable working time with Summerset®
- 98% Effective Bearing Area (EBA) is typically achieved following proper grouting procedures
- Permanent support for machinery requiring precision alignment
- Locally manufactured under strict quality control standards

USES

- Low temperature placement
- Short turnaround time
- Grouting of machinery baseplates to maintain precision alignment
- Nonshrink grouting of structural steel and precast concrete
- Installation of anchors and dowels
- Support of tanks and vessels

TECHNICAL SUPPORT

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

- Over 30 years of experience in precision grouting
- Technical Center staffed with experienced engineers available for consultation
- 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 Instant Grout is packaged in heavy-duty, polyethylene lined bags or plastic pails containing 50 lb (22.7 kg), yielding approximately one-half cubic foot (14.2 liters).

SHELF LIFE

One year in bags and two years in pails in original unopened packaging when stored in dry conditions. Higher humidity will reduce the shelf life.

TYPICAL PROPERTIES AT 73°F (23°C)

Working Time	10 - 15 minutes
Early Height Change, ASTM C 827	0.0 to 4.0%
Hardened Height Change, ASTM C 1090	0.0 to 0.3%
Bond Strength, ASTM C 882	2500 psi (17.3 MPa)
28 Days	
Effective Bearing Area	95%
Compressive Strength, ASTM C 109	
4 Hours	4000 psi (27.6 MPa)
1 Day	5000 psi (34.5 MPa)
7 Days	6000 psi (41.4 MPa)
28 Days	7000 psi (48.3 MPa)

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 in contact with Five Star Instant Grout shall be free of oil, grease, laitance and other contaminants. Concrete must be clean, sound and roughened to ensure a good bond. Soak the concrete with liberal quantities of potable water, leaving concrete saturated and free of standing water.
2. **MIXING:** Mix Five Star Instant Grout thoroughly for three to five minutes to a uniform consistency with a mortar mixer. For optimum performance, condition grout to between 60°F and 80°F (16°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. Follow printed instructions on the package.
3. **METHODS OF PLACEMENT:** Five Star Instant Grout may be poured into place. For placement thicknesses of less than one inch (25 mm), or greater than three inches (75 mm), call the Five Star Products Engineering and Technical Center at 203-336-7900.
SPECIAL CONDITIONS: For use in cold temperatures, Five Star Instant Grout must be maintained at a temperature of at least 35°F (2°C). Protect from freezing until a compressive strength of at least 1000 psi (6.9 MPa) is obtained. Faster strength gain will occur when the Five Star Instant Grout and mixing water have been conditioned to a higher temperature prior to placement.
In hot temperatures, Five Star Instant Grout should be kept as cool as possible, but not exceeding 80°F (27°C). Ice cold water should be used for mixing to help maintain sufficient working time.
4. **POST-PLACEMENT PROCEDURES:** Five Star Instant Grout shall be wet cured immediately upon hardening for a minimum of two hours. 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 Design-A-Spec™ or call the Five Star Products Engineering and Technical Center at 203-336-7900.

LIMITATIONS

- At time of placement, if temperatures of equipment and surfaces are not between 35°F and 80°F (2°C and 27°C), refer to Design-A-Spec™ for hot weather grouting procedures.
- Substrate shall be free of frost and ice.
- Grout shall be protected from freezing until it reaches 1000 psi (6.9 MPa).
- Never exceed the maximum water content as stated on the bag or add an amount that will cause segregation.
- For placements thinner than one inch (25 mm) or greater than three inches (75 mm), contact the Five Star Products Engineering and Technical Center.
- Construction practices dictate concrete foundation should achieve its design strength before grouting.

CAUTION

Contains cementitious material and crystalline free silica. International Agency for Research on Cancer has evaluated 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.**

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, EXPRESSED 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."

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 Engineering and Technical Center at 203-336-7900.

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