

PRODUCT DATA

FIVE STAR INSTANT GROUT RAPID STRENGTH GAIN PRECISION NONSHRINK 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 Air Release technology ideal for cold weather applications, while providing the greatest reliability. When tested in accordance with ASTM C 827, Five Star Instant Grout exhibits positive expansion. Five Star Instant Grout meets the performance requirements of ASTM C 1107-02 Grades A, B and C, ASTM C 1107-07, and CRD-C 621-93 specifications for nonshrink grout over a wide temperature range, 40°F - 90°F (4°C - 32°C).

ADVANTAGES

- Air release technology per ACI 351.1 R
- Fast turnaround time
- Superior cold weather performance
- Permanent support for machinery requiring precision alignment
- High four hour compressive strength
- 95% Effective Bearing Area (EBA) is typically achieved following proper grouting procedures

USES

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

PACKAGING AND YIELD

Five Star Instant Grout is packaged in heavy-duty, polyethylene lined bags or plastic pails and is available in 55 lb (24.9 kg) units yielding approximately 0.44 cubic feet (12.5 liters) of hardened material at maximum water content.

SHELF LIFE

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

TYPICAL PROPERTIES @ 70°F (21°C)

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	
• 1 Day	2,500 psi (17.3 MPa)
Effective Bearing Area	95%
Compressive Strength, ASTM C 942 (C109 Restrained)	
• 4 Hours	4,000 psi (27.6 MPa)
• 1 Day	5,500 psi (38.0 MPa)
• 14 Days	6,500 psi (44.9 MPa)
• 28 Days	7,000 psi (48.3 MPa)
Working Time at 70°F (21°C)	10 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

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 concrete surfaces for 8 to 24 hours prior to application with liberal quantities of potable water, leaving the concrete saturated and free of standing water.
2. FORMWORK: Formwork shall be constructed of rigid non-absorbent materials, securely anchored, liquid-tight and strong enough to resist forces developed during grout placement. The clearance between formwork and baseplate shall be sufficient to allow for a headbox. The clearance for remaining sides shall be one to two inches (25 - 50 mm). Areas where bond is not desired must be treated with form oil, paste wax or similar material. Isolation joints may be necessary depending on pour dimensions. Contact Stonhard for further information.

FIVE STAR INSTANT GROUT

RAPID STRENGTH GAIN PRECISION NONSHRINK GROUT

3. MIXING: Mix Five Star Instant 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 between 60°F and 80°F (16°C and 27°C). Mix Five Star Instant Grout with 3 to 3 1/2 quarts potable water per 55 lb. bag. Working time is approximately 10 minutes at 70°F (21°C). Follow printed instructions on the package. Always add mixing water first to mixer followed by grout.

4. METHODS OF PLACEMENT: Five Star Instant Grout may be poured into place. Minimum placement thickness for Five Star Instant Grout is 1 inch (25 mm). For pours over 3 inches (75 mm) in depth Five Star Instant Grout should be extended with a clean damp coarse aggregate meeting the requirements of ASTM C 33. Refer to the Five Star Technical Bulletin "Cement Grout Aggregate Extension" for guidelines.

5. POST-PLACEMENT PROCEDURES: Five Star Instant Grout shall be wet cured for a minimum of two to eight hours depending on placement volume and depth. 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™ installation guidelines or call Stonhard at (800) 263.3112.

CONSIDERATIONS

- 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 extreme weather grouting procedures, or contact Stonhard at (800) 263.3112.
- 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.
- 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 SAFETY DATA SHEET.

For worldwide availability, additional product information and technical support, contact your local sales representative, or call Stonhard at (800) 263.3112.

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."

Important:

Stonhard Construction Solutions believes the information contained here to be true and accurate as of the date of publication. Stonhard Construction Solutions makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

Rev. 07/09

