



FSP® CONSTRUCTION GROUT

General Purpose Nonshrink Grout

PRODUCT DESCRIPTION

FSP® Construction Grout is a cement-based, nonshrink grout ideal for general construction grouting applications. FSP Construction Grout meets the Corps of Engineers Specification CRD-C-621-89 and can be installed over a wide temperature range. FSP Construction Grout provides high strengths and can be mixed from drypack to flowable consistency.

ADVANTAGES

- Meets CRD-C-621-89 specification for nonshrink grout
- High 7 compressive strengths
- Drypack to flowable consistency
- Locally manufactured under strict quality control standards

USES

- Nonshrink grouting of structural steel and precast concrete
- Nonshring grouting of wind turbines
- Installation of anchors, dowels and reinforcing bars
- General construction grouting applications

PACKAGING AND YIELD

FSP Construction Grout is packaged in heavy-duty polyethylene lined bags and is available in 50 lb (22.7 kg) units yielding approximately 0.42 cubic feet (11.9 liters) at maximum water.

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 (21°C)		
Compressive Strength, ASTM C 109	Flowable	Drypack
3 Days	3500 psi (24.1 MPa)	5000 psi (34.5 MPa)
7 Days	6000 psi (41.4 MPa)	8000 psi (55.2 MPa)
28 Days	7000 psi (48.3 MPa)	9500 psi (65.5 MPa)
Volume Change, CRD –C-621-89 Expansion		0.0 to 0.30%
Working Time at 70°F (21°C)	20 minutes	20 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 in contact with FSP® Construction 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 surface for 8 to 24 hours prior to application with liberal quantities of potable water, leaving the concrete saturated and free of standing water.
2. **MIXING:** Mix FSP Construction Grout thoroughly for approximately five minutes to a uniform consistency with a mortar mixer (stationary barrel with moving blades). With the mixer running add approximately 80% of the pre-measured potable water (total water content is 2.5 to 3.5 quarts potable water per 50 lb. unit) to the mixer. Adjust consistency if necessary, but do not exceed maximum water content stated on the package or an amount that will cause segregation. For optimum performance, maintain grout at ambient temperatures between 50°F and 90°F (10°C and 32°C). Use heated or chilled water to help adjust working time. Do not mix more material than can be placed in 20 minutes. Follow printed instructions on the package.
3. **METHODS OF PLACEMENT:** FSP Construction Grout may be dry packed or poured into place. For placement thicknesses of less than one inch (25 mm), or greater than six inches (150 mm), call the Five Star Products Engineering and Technical Service Center at (800) 243-2206.
4. **POST-PLACEMENT PROCEDURES:** FSP Construction Grout shall be wet cured for a minimum of three days, or coated with an approved curing compound after a minimum 24 hour wet cure. 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 the Five Star Products Engineering and Technical Service Center at (800) 243-2206.

CONSIDERATIONS

- At time of placement, if temperatures of equipment and surfaces are not between 50°F and 90°F (10°C and 32°C), consider the use of Five Star® Grout or Five Star® Instant Grout, or call the Five Star Products Engineering and Technical Service Center at (800) 243-2206.
- Never exceed the maximum water content stated on the package or add an amount that will cause segregation.
- For precision grouting applications such as equipment and machinery baseplates, use Five Star Grout.
- 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 Five Star distributor, local sales representative, or you may call Five Star's Engineering and Technical Service Center at (800) 243-2206.

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."

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