

Gantrail® High Strength Grout

High Strength Precision Non-shrink Grout



www.gantrail.com



Gantrail® High Strength Grout is the industry's leading cement-based, non-metallic, non-shrink grout for supporting machinery and equipment requiring precision alignment. It is formulated with Air Release technology that combines high performance with the greatest reliability. When tested in accordance with ASTM C 827, Gantrail High Strength Grout exhibits positive expansion. Gantrail High Strength 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 non-shrink grout over a wide temperature range, 40°F - 90°F (4°C - 32°C).

ADVANTAGES

- Air release technology per ACI 351.1 R
- High 1, 7, and 28 day compressive strengths
- 95% Effective Bearing Area (EBA) is typically achieved following proper grouting procedures
- Provides placement versatility: pour, pump or dry pack
- Permanent support for machinery requiring precision alignment
- Does not contain gas generating additives, such as aluminium powder
- Non-shrink from the time of placement

USES

- Grouting of machinery and equipment under high load applications such as wind turbines to maintain precision alignment
- Non-shrink grouting of structural steel and pre-cast concrete
- Grouting of anchors and dowels
- Support of tanks and vessels

PACKAGING & YIELD

Gantrail High Strength Grout is packaged in heavy-duty, 50 lb (22.7 kg) polyethylene lined bags yielding approximately 0.42 cubic feet (11.9 litres) of hardened material. May also be mixed to a hand pack consistency to meet most applications.

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)

Early Height Change, ASTM C 827	0.0 to 4.0%
Hardened Height Change, ASTM C 1090	Positive Expansion
Effective Bearing Area	95%
Bond Strength, ASTM C 882 / 28 Days	2,000 psi (13.8 MPa)
Pull-out Strength, Shear Bond with #5 deformed bar, 7 days	2,400 psi (16.6 MPa)
Compressive Strength, ASTM C 942 (C109 Restrained)	
1 Day	6,500 psi (44.8 MPa)
7 Days	11,500 psi (79.3 MPa)
28 Days	14,000 psi (96.5 MPa)
Working Time at 70°F (21°C)	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.

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PLACEMENT GUIDELINES

- SURFACE PREPARATION:** All surfaces in contact with Gantrail High Strength 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.
- 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 Gantry Railing Ltd. at +44 (0) 1452 300688 for further information.
- MIXING:** Mix Gantrail 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, maintain grout at ambient temperatures between 40°F and 90°F (4°C and 32°C). Use heated or chilled water to help adjust working time. Mix Gantrail High Strength Grout with 3 to 4 quarts (3.4 to 4.6 litres) potable water per 50lb. (22.7kg) bag. Working time is approximately 20 minutes at 70°F (21°C). Follow printed instructions on the package. Always add mixing water first to mixer followed by grout.
- METHODS OF PLACEMENT:** Gantrail High Strength Grout may be dry packed, pumped or poured into place. Minimum placement thickness for Gantrail High Strength Grout is one inch (25 mm). For pours over 6 inches (150 mm) in depth Gantrail High Strength Grout should be extended with a clean damp coarse aggregate meeting the requirements of ASTM C 33. Contact Gantry Railing Ltd. at +44 (0) 1452 300688 for further information.
- POST-PLACEMENT PROCEDURES:** Gantrail High Strength Grout shall be wet cured for a minimum of three days, or coated with an approved curing compound meeting the requirements of ASTM C 309 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.

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 more information on the complete product line or for technical assistance, please contact Gantrail.

WARRANTY STATEMENT FOR ALL GANTRY RAILING LTD. PRODUCTS MANUFACTURED BY FIVE STAR PRODUCTS, INC.: "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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