

LOCTITE GP Flowable Grout Geopolymer Mortar

WATER/WASTEWATER

LOCTITE GP Flowable Grout is a high-performance fiber reinforced geopolymer material designed as a flowable fill and grout for civil structures. This high-strength, ultralow porosity material is made from natural mineral polymers and industrial waste streams. LOCTITE GP Flowable Grout can be pumped long distances and quickly sets to superior physical properties.

BENEFITS

- › Provides physical properties associated with cement mortars, but with the chemistry similar to that of an engineered stone
- › Prevents cold joints between layers from its unique chemical nature; compatible with GeoSpray geopolymer for structural pipe rehabilitation
- › Extended working time while pumping
- › Ideally suited for pipe invert paving and protection
- › Safe and sustainable

TEST METHOD	DURATION	LOCTITE GP Flowable Grout
Compressive Strength ASTM C-39/C-109	1 Day 28 Days	Min. 5,000 psi / 34 MPa Min. 11,500 psi / 79 MPa
Flexural Strength ASTM C-78	7 Day 28 Days	750 psi / 5.2 MPa 1500 psi / 10.3 MPa
Bond Strength to Concrete ASTM C-882	28 Days	Min. 3,000 psi / 20 MPa
Set Time ASTM C-807 Initial Cure Time	Initial Set Final Set	35 - 50 Minutes 85 - 110 Minutes
Freeze Thaw Durability ASTM C-666	300 Cycles	100% Zero Loss
Shrinkage ASTM C-1090	28 Days	0.00% @ 65% R. H.
Tensile Strength ASTM C-496	28 Days	Min. 800 psi / 5.5 MPa

Data shown above reflects results in laboratory controlled conditions.
Reasonable variation of data to be expected.

APPLICATIONS:

- › Sewers
- › Culverts
- › Pipes
- › Channels
- › Sediment Basins
- › Tunnels

LOCTITE GP Flowable Grout TYPICAL USES:

LOCTITE GP Flowable Grout geopolymer can be used for rehabilitation of pipes and structures in the Civil Infrastructure and Industrial Markets.



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COMPOSITION

A proprietary micro-fiber reinforced ultra dense flowable geopolymer mortar designed for mechanical pumping LOCTITE GP Flowable Grout.

CHARACTERISTICS

A dark grey mortar with near-zero porosity. Largest particle size: 3.0 mm.

YIELD AND COVERAGE

Yields 0.43 ft³ (0.012m³) per 50 lbs. For one 50lb bag, coverage is 10.3 ft² at a 0.5" depth (0.96m² per 12mm depth).

PACKAGING

LOCTITE GP Flowable Grout is available in 50 lb (22.7kg) sealed bags or in 2,000 lb (908 kg) super sacks.

CLEANING AND PREPARATION

The surface shall be thoroughly cleaned. Use high-pressure water blasting with a minimum of 3500 psi (or as required by local provisions) to clean and free all foreign material including dirt, grit, roots, grease, sludge or other material that may be attached to the existing surface. All loose or defective brick, grout, or surface irregularities should be removed to provide an even surface prior to application of GT Invert Repair. When grease and oil are present, an approved detergent or muriatic acid shall be used integrally with the high pressure cleaning water. All materials resulting from the cleaning of the pipe shall be removed prior to application of GT Invert Repair.

MIXING

Do not exceed a 0.14w/c ratio. Always add LOCTITE GP Flowable Grout to the water. Follow normal industry standards for batching and mixing.

WORK TIME

Working time is 30-60 minutes at 80°F (27°C) if mixed continuously.

APPLICATION

LOCTITE GP Flowable Grout should be pumped from a horizontal mix auger cavity via an adjustable rotor stator pump through a hose for delivery to the appropriate application device.

FINISHING

If necessary, troweling of materials can begin following the application. Initial troweling shall be in a continuous motion to compress the material into voids. Take precautions not to over trowel.

LOCTITE GP Flowable Grout can be finished using a magnesium float, wood float, sponge float, broom or brush, depending on the surface texture desired. Do not use a steel trowel.

CURING

Optimum curing occurs in a moist and moderate environment. General underground conditions are usually adequate to meet this requirement. If dry and/or hot conditions are present, the use of a wind barrier and fogging spray will be required. During hot weather conditions, chilled water may be used to mix LOCTITE GP Flowable Grout geopolymer. LOCTITE GP Flowable Grout geopolymer material should be maintained at a temperature lower than 90°F (32°C). Standard industry practices may be used to maintain proper temperature.

Alternatively, LOCTITE GP Flowable Grout should not be placed when the temperature in the curing environment is below 37°F (3°C). During cold weather conditions, heaters, thermal breaks, and other methods may be used to maintain temperature above that threshold. Refer to the GeoTree Cold Weather manual.

QUALITY CONTROL & MATERIAL TESTING

For each section length designated by the owner in the contract documents or purchase order, LOCTITE GP Flowable Grout mortar will be collected at the end of the hose near the discharge point. Use 4" x 8" cylinders in accordance with Test Method ASTM C 39/39M.

HEALTH & SAFETY

LOCTITE GP Flowable Grout is a cementitious powder, is alkaline, and may cause significant skin and eye irritation. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For safety and health precautions, reference the current version of the Safety Data Sheet for LOCTITE GP Flowable Grout. When using GT Invert Repair in a confined space or closed area, consult the current OSHA or ANSI bulletins on safety requirements. Do not take internally. If swallowed, call a physician immediately.

STORAGE

LOCTITE GP Flowable Grout geopolymer should be stored in a cool, dry location. Stored under proper conditions, shelf life is one year.

WARRANTY

GeoTree Solutions warrants this product to be free of defects in material and manufacturing. Should the product prove to be defective, the liability to GeoTree shall be limited to replacement of the product, ex-factory.

GeoTree makes no warranties as to merchantability or fitness for a particular purpose. This warranty is in lieu of all other warranties expressed or implied. Users should determine the suitability of the product for the intended use and assume all risk and liability in connection therewith.

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Before using any GeoTree product, the user must review the most recent version of the product's technical data sheet, safety data sheet and other applicable documents, available at www.geotreesolutions.com or by calling +1.855.655.6750.

