

LOCTITE GeoSpray 61 Geopolymer Mortar

WATER/WASTEWATER

LOCTITE GeoSpray 61 geopolymer is a high performance fiber reinforced mortar specifically designed for structural enhancement of pipes in drinking water applications, or where there is a need for a more eco-friendly solution. This high strength, ultra-low porosity material is made from natural mineral polymers and recycled industrial waste streams. The LOCTITE GeoSpray 61 system is designed for use through multiple move casting up a line application techniques including pouring, placing, trowelling, spraying, or centrifugal casting.

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
- › Can be applied monolithically to any shape pipe, including right angles and curves
- › Safe and sustainable - passes three-hour eco-toxicity testing

TEST METHOD	DURATION	LOCTITE GeoSpray 61
Compressive Strength ASTM C-39/C-109	1 Day 28 Days	Min. 2,500 psi / 17 MPa Min. 8,000 psi / 55 MPa
Flexural Strength ASTM C-78	7 Day 28 Days	750 psi / 5.2 MPa 1500 psi / 10.3 MPa
Modulus of Elasticity ASTM C469	1 Day 28 Days	3,000,000 psi / 20700 MPa 5,800,000 psi / 40000 MPa
Bond Strength to Concrete ASTM C-882	1 Day 28 Days	Min 900 psi / 6.2 MPa Min. 2,500 psi / 17 MPa
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

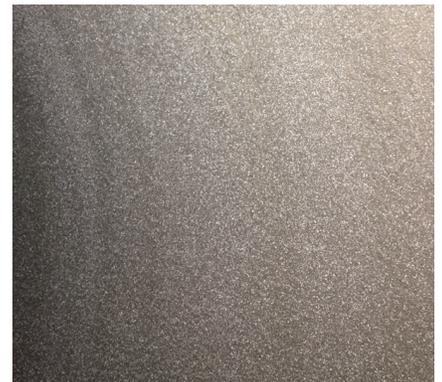
Data shown above reflects results in laboratory controlled conditions.
Reasonable variation of data to be expected.

APPLICATIONS:

- › Potable Water
- › Pipes
- › Tanks
- › Reservoirs
- › Ecologically Sensitive Areas

LOCTITE GeoSpray 61 TYPICAL USES:

LOCTITE GeoSpray 61 geopolymer is designed specifically for drinking water applications for pipes with an inner diameter seven (7) inches or greater, and for tanks greater than 300 gallons.



Meets the requirements of NSF/ANSI/CAN 61 & 372



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COMPOSITION

A proprietary micro-fiber reinforced ultra dense geopolymer mortar designed for mechanical pumping and spraying. LOCTITE GeoSpray 61 is an inorganic polymeric system that adheres strongly to prepared cement surfaces and itself.

CHARACTERISTICS

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

YIELD AND COVERAGE

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

PACKAGING

GeoSpray is available in 50lb (22.7kg) sealed bags or in 2,000lb (908kg) 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 provision) to clean and free all foreign material, including dirt, grit, roots, grease sludge and other materials that may be attached to the surface. All loose or defective brick, grout, should be removed prior to application. When grease and oil are present, an approved detergent, muriatic acid or hot water may be used with the high-pressure cleaning as needed. All materials resulting from the cleaning of the pipe shall be removed prior to application. Well adhered Bitumen coatings on CMP pipe need not be removed. Active infiltration should be sealed to the greatest extent possible prior to application. The surface existing host structure can be damp at installation.

MIXING

Do not exceed a 0.20 w/c ratio. Always add GeoSpray to the water. Follow normal industry standards for batching and mixing.

WORK TIME

Working time is 30-45 minutes at 80°F (27°C) if mixed continuously.

APPLICATION

Once mixed to proper consistency and homogeneity, LOCTITE GeoSpray 61 can be hand troweled as a repair mortar for crack repair prior to spraying. LOCTITE GeoSpray 61 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 (spray nozzle or spinner head), and shall be applied to a damp surface.

FINISHING

If necessary, troweling of materials can begin following the spray application. Initial troweling shall be in an upward motion, to compress the material into voids and solidify the pipe wall. Take precautions not to over trowel.

LOCTITE GeoSpray 61 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 GeoSpray 61 geopolymer. GeoSpray 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 GeoSpray 61 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 GeoSpray 61 will be collected at the end of the hose near the discharge point. Use 4" by 8" cylinders in accordance with Test Method ASTM C 39/39M.

HEALTH & SAFETY

LOCTITE GeoSpray 61 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 GeoSpray 61. When using LOCTITE GeoSpray 61 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 GeoSpray 61 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 Solutions shall be limited to replacement of the product, exfactory. GeoTree Solutions 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.

