

LOCTITE GEOSTRONG SL SELF-LEVELING MORTAR

Fast-setting Geopolymer Mortar

LOCTITE GeoStrong SL is a one-component, non-shrink, fast-setting geopolymer mortar designed for civil infrastructure and industrial flooring applications. The material can be used as a stand-alone flooring, underlayment for subsequent floor covering and coatings, or as a consolidated fill material. This self-leveling material is a chemical-resistant geopolymer mortar that allows for fast application, up to two inches in one layer, with fast finishing and reduced time between lifts.

TYPICAL USES

LOCTITE GeoStrong SL can be used for surfaces below, on, or above grade in Civil Infrastructure and Industrial applications, including:

- Agricultural
- Building
- Chemical Plants
- Food
- Parking structures

| PROPERTY / TEST METHOD | INFORMATION | METHOD |
|------------------------------------------|-------------|--------------------------|
| Compressive Strength ASTM C-39/C-109 | 1 Day | Min. 4,000 psi / 27 MPa |
| | 28 Days | Min. 12,000 psi / 82 MPa |
| Flexural Strength ASTM C-78 | 7 Day | 1000 psi / 6.8 MPa |
| | 28 Days | 1500 psi / 10.3 MPa |
| Set Time ASTM C-807 Initial Cure Time | Initial Set | 70 - 130 Minutes |
| | Final Set | 90 - 150 Minutes |
| Bond Strength to Concrete ASTM C-882 | 1 Day | Min 900 psi / 6.2 MPa |
| | 28 Days | Min. 2,500 psi / 17 MPa |
| Shrinkage ASTM C-1090 | 28 Days | 0.00% @ 65% R. H. |
| Freeze Thaw Durability ASTM C-666 | 300 Cycles | 100% Zero loss |
| Tensile Strength ASTM C-496 | 28 Days | Min. 1000 psi / 6.8 MPa |

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

BENEFITS

- Geopolymer reaction minimizes/ eliminates cold joints between layers
- High early and ultimate strength
- High tensile and flexural strength
- Highly chemical resistant
- Open to foot traffic: 2-4 hours

STORAGE

LOCTITE GeoStrong SL geopolymer should be stored in a cool, dry location. Stored under proper conditions, its shelf life is one year.





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COMPOSITION

LOCTITE GeoStrong SL is an inorganic polymeric system that adheres strongly to prepared cement & wood surfaces and itself.

CHARACTERISTICS

A dark grey mortar with near-zero porosity. Wet density of ~132.5 lbs/ft³, or 2122 kg/m³. 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

LOCTITE GeoStrong SL is available in 50lb (22.7kg) sealed bags.

CLEANING AND PREPARATION

Substrate must be clean, sound concrete that is free of gypsum compounds and all materials that may inhibit bond such as: oil, curing compound, dust, mastic, bond breakers, and other surface contaminants. Preparation should be done by mechanical means to achieve a surface profile equal to CSP 3 - 5 in accordance with ICRI Guideline 310.2. Properly clean profiled area. Mechanical methods of surface preparation, such as shot blasting, are preferred. Acid etching is not recommended. Surface must be dry and be between 50°F and 90°F (10°C and 32°C).

MIXING

Always add material to water.

Add one 50-lb (22.7-kg) bag of GeoStrong SL to 3.0 to 3.5 quarts of potable water. Do not exceed 3.5 quarts of water. GeoStrong SL may be mixed using a drill-mounted paddle mixer, or by using an appropriate mixer and pump. Mix 3 to 5 minutes until the mixture is smooth and lump free. Avoid mixers that entrap large amounts of air. Mixed LOCTITE GeoStrong SL should be placed within 20 minutes at 70°F (21°C). Maintain material temperature between 60°F and 80°F (16°C and 27°C). Continuous mixing/pumping systems may be used.

WORK TIME

Work time is 30 - 60 minutes at 70°F (21°C).

APPLICATION

Apply LOCTITE GeoStrong SL up to 2" thick. For thicknesses greater than 2" multiple lifts may be required to avoid excessive heat generation which can result in shrinkage cracks.

Do not extend.

Pour or pump LOCTITE GeoStrong SL. The product should be placed continuously to provide a smooth and uniform surface. Start in one corner placing a continuous stream of material along one edge of the area and back lap as soon as possible for a uniform, smooth surface.

FINISHING

Tools such as spiked rollers, notched squeegees, trowels and smoothers may be used to assist placement. Do not use a steel trowel – use a wood or magnesium float as desired. Follow ACI guidelines for proper curing. On windy or hot days or when under direct sunlight, wet curing is recommended.

CURING

Optimum curing occurs in a moist and moderate environment. Follow ACI recommendations for curing.

During cold weather conditions, heaters, thermal breaks, and other methods may be used to maintain temperature above that threshold.

HEALTH & SAFETY

LOCTITE GeoStrong SL is a cementitious powder that 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 GeoStrong SL. When using GeoStrong SL 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.

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 datasheet and other applicable documents, available at www.geotreesolutions.com or by calling +1.855.655.6750.



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