

**PRODUCT NAME**

# Gem-Gard™ SL ST / Plus (MS)

## Silane Based Concrete Sealer



**MANUFACTURER**

**Gemite® Products Inc.**

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**USA**

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**FEATURES**

- deep penetrability
- chemically reactive with the substrate
- reduces water and chloride penetration
- breathable
- does not discolor the surface
- chemically resistant to ice melting compounds, fuel, oils and atmospheric contamination
- can be applied to slightly damp surfaces
- long term durability
- increases freeze/thaw resistance of the substrate
- economical

**PRODUCT DESCRIPTION**

**Basic Use**

*Gem-Gard SL ST / Plus* is a clear, water repellent sealer which prevents water and chloride intrusion into concrete bridge decks, parking decks and abutments.

**Composition of Materials**

*Gem-Gard SL ST / Plus* contains silane solids diluted in mineral spirit. The small molecular size of the active materials allows maximum penetration into the concrete substrate. The composition is further modified to increase effectiveness of the silane. Silane in the presence of moisture, react chemically with cement. This chemical reaction provides a permanent bond of the active water repellent material. The sealer is breathable and allows the moisture contained in concrete to escape freely. *Gem-Gard SL ST / Plus* does not change the color of the substrate.

**Limitations**

Do not apply below grade or over damp surfaces, or if rain is imminent, or if either surface or ambient temperature is 4°C (40°F) or below, or when humidity is over 90%. Do not apply over painted surfaces or wood surfaces. *Gem-Gard SL ST / Plus* is not designed to waterproof cracked surfaces under wind driven rain or other severe conditions. Wash all over-sprayed glass surfaces immediately.

**Health and Safety**

Solvents are flammable in liquid state. Use only in a well ventilated area. Keep away from heat, sparks and open flame. No smoking shall be allowed in or near the immediate work area. Use explosion proof equipment. Avoid breathing of vapor or spray mist. For exterior applications approved chemical cartridge respirator should be worn by the applicator. For interior application, use mechanical exhaust such as approved air line or positive pressure hose masks. For additional information on safety requirements, refer to *Gem-Gard SL ST / Plus* MSDS. **FOR INDUSTRIAL USE ONLY.** Keep the product out of reach of children.

**Packaging**

*Gem-Gard SL ST / Plus* is supplied in 20 L (5.3 USG) pails, or 209 L (55.2 USG) drums.

**Coverage**

*Apply Gem-Gard SL ST / Plus* at the following rates:

Dense concrete	2.9-3.7 m <sup>2</sup> /L	120-150 ft <sup>2</sup> /USG
Porous concrete and Brick	2.5-2.9 m <sup>2</sup> /L	100-120 ft <sup>2</sup> /USG

The above figures are for estimation purposes only. The coverage rate must satisfy the surface porosity.

**Storage and Transportation**

Shelf life of unopened containers is twelve (12) months. After opening the container, the material must be used within several weeks. Packaged 36 pails per pallet.

**TECHNICAL DATA (20% concentration)**

Main Active Material	IBTMO silane ST 20% Plus 40% solids
Flash Point	8°C (71°F)
Solvent	Mineral Spirit
Weight	0.83 kg/L (7.01 lbs/USG)
Penetration	3 to 6 mm (1/8 - 1/4 in)
Water vapor transmission: NCHRP 244	Minimum 100% transmitted
Chloride Absorption: NCHRP 244	88% improvement over control
Water Absorption: NCHRP 244	90% improvement over control
Southern Climate Exposure: NCHRP 244, chloride	96% improv. over control
Freeze/Thaw Sealing: ASTM C 672	Provides resistance to freeze/thaw
Surface Appearance:	No visual change after application

Gemite Products Inc.  
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03064 Concrete Sealers  
07180 Water Repellents

## INSTALLATION

Guide Specification and Application Instructions contain additional information specific to each application and must be followed.

### Surface Preparation

Surface must be clean and free of dust, dirt and other contaminants. Use high pressure waterblast, shotblast or sandblast. The surface to be treated may be damp, but must be absorbent to allow good penetration of *Gem-Gard SL ST / Plus*. All caulking, patching and joint sealing must be installed prior to application of *Gem-Gard SL ST / Plus*.

### Application

Carry out test application to ensure compatibility, appearance and actual application rate. *Gem-Gard SL ST / Plus* contains flammable solvent. Do not use near fire and provide good ventilation when applying indoors. Applicators should wear respirators. All exterior air conditioning ventilators should be covered during application and air handling equipment be turned off.

For maximum penetration a low pressure (20 psi) airless spray is recommended. Sprayer must be fitted with alcohol resistant gas-kets. When using roller or brush, ensure that enough material is applied. Apply sufficient material to completely saturate the substrate and brush out excess solution that does not penetrate.

### Flat Surface

Apply *Gem-Gard SL ST / Plus* in a single saturating application to make the surface wet for 2-3 minutes before penetrating into the concrete substrate. Broom out thoroughly any pools and puddles until they completely penetrate into the surface.

### Vertical Surfaces

Use two coats on porous surfaces; one coat is sufficient when treating dense and smooth concrete substrate. Apply *Gem-Gard SL ST / Plus* in flooding application. Start spraying application at the top of the area and use vertical strokes first to break the surface tension. Follow immediately with slow horizontal strokes. It is essential that 15 - 20 cm (6 - 8 in) rundown be maintained to obtain maximum penetration.

## AVAILABILITY AND COST

*Gem-Gard SL ST / Plus* is available worldwide. Contact Gemite for the name of the nearest Representative / Distributor and pricing information.

## MAINTENANCE

Contact Gemite Technical Service for information regarding maintenance.

## WARRANTY

A limited twelve (12) month Material Replacement Warranty is available. For complete details contact Gemite's Head Office.

## TECHNICAL SERVICE

For advice on suitability of *Gem-Gard SL ST / Plus* for a specific application, specification assistance and application advice contact Technical Services at (888) 443-6483 or (905) 672-2020.

### Short Specification

The water repellent sealer will be isobutyl trimethoxy silane, in mineral spirit solvent *Gem-Gard SL [ST] [Plus]* as manufactured by Gemite Products Inc., Amherst, NY (Mississauga, Ontario). It shall be applied at a minimum rate of \_\_\_\_\_ m<sup>2</sup>/ L (ft<sup>2</sup>/USG) as per manufacturer's current Guide Specifications and Application Instructions. It shall meet the following performance criteria:

Penetration	3 to 6 mm (1/8 - 1/4 in)
Water vapor transmission: NCHRP 244	Minimum 100% transmitted
Chloride Absorption: NCHRP 244	88% improvement over control
Water Absorption: NCHRP 244	90% improvement over control
Southern Climate Exposure: NCHRP 244, chloride	96% improv. over control
Freeze/Thaw Scaling: ASTM C 672	Provides resistance to freeze/thaw
Surface Appearance:	No visual change after application