

PRODUCT NAME

Gem-Crete™ TO ST

Thin Self-Leveling Overlay / Topping

Exterior Vehicular Traffic ready



MANUFACTURER

Gemite® Products Inc.

Toll Free: 888-4-GEMITE (888-443-6483)
E-mail: techinfo@gemite.com
Web Site: www.gemite.com

USA	CANADA
160-3480 East Robinson Rd.	1787 Drew Road
Amherst, New York 14228	Mississauga, Ontario L5S 1J5
Phone 888-443-6483	Phone 905-672-2020
Fax 888•443•6329	Fax 905•672•6780

FEATURES

- Exterior Traffic Surface
- Self-Leveling Thin Overlay
- High strength & Abrasion resistance (wet or dry)
- Superior Workability & Easy Application
- High Bond - even to Wet concrete
- Breathable
- Highly freeze/thaw Resistant
- Nonflammable & Nontoxic
- Economical

PRODUCT DESCRIPTION

Basic Use

Surfacing & waterproofing of parking decks, industrial floors, loading docks and patios. Waterproofing and repair of concrete exposed to high concentrations of salt solutions and weak acids.

Composition and Materials

Gem-Crete TO ST - cement based, polymer modified material, especially formulated for protection and leveling of concrete.

Excellent resistance to water, salt & weak acids is assured by formulation merging most suitable polymers & inorganic fillers.

High abrasion resistance is delivered by combining suitable chemicals and aggregate.

Limitations

Do not apply *Gem-Crete TO ST* when the temperature is expected below 4°C (40°F) within 48 hours, or when rain is imminent. Use Hot Weather concreting precautions when applying in temperatures exceeding 25°C (77°F) or under sunny and windy conditions.

Health and Safety

Gem-Crete TO ST is nontoxic & nonflammable. Your skin might be sensitive to cement. We recommend use of rubber gloves. Avoid contact with eyes & prolonged contact with skin. If contact occurs, flush immediately with water. Seek medical advice if irritation occurs. Harmful if digested.

FOR INDUSTRIAL USE ONLY. Keep product out of reach of children. Consult SDS for additional information.

Color

Available in Industrial Gray & Light Gray.

Packaging

Gem-Crete TO ST Premix is packaged in 22.7 kg (50 lb) bags.

Yield

Gem-Crete TO ST Premix yields approx. 13.3 L (0.47 ft³) and covers approx. 2.2 m² @ 6 mm (22.6 ft² @ 1/4") per bag.

The actual coverage depends on surface roughness & thickness applied. The applicator must carry out a sample application to determine the actual coverage for the given substrate and application thickness.

Storage and Transportation

Gem-Crete TO ST when stored on pallets in a dry, cool area, free from moisture, has a shelf-life of 12 months.

Packaged 55 bags (Premix) per pallet.

TECHNICAL DATA (Industrial Gray)

Modulus of Rupture (ASTM C348)	4.95 - 5.4 MPa (720 - 790 psi)
Compressive Strength (ASTM C109)	34.5 - 37.9 MPa (5,000 -5,500 psi)
Freeze/Thaw Resistance (ASTM C666, Procedure A)	less than 1% weight loss after 300 cycles
Direct Tension Bond	1.50-2.0 MPa (300 - 400 psi)
Salt Scaling Resistance (ASTM C672)	after 50 freeze/thaw cycles, no scaling
Flow time	15-20 minutes
Toxicity	nontoxic in wet or dry form

INSTALLATION

Current Guide Specification & application Instructions contain additional information specific to each application and must be followed. Gemite's Technical Service must be consulted before starting a project to ensure that the correct surface preparation and application procedures are followed.

Surface Preparation

Remove all loose, delaminated, or oil contaminated concrete. Use shotblast, grinding, or other mechanical method to remove latex paints, sealers, gypsum residue, laitance, dust and open capillary porosity. Concrete surfaces should have a min. CSP #3 Surface Profile as per ICRI Technical Guidelines.

Do NOT use acid etching or paint removers.

Gemite Products Inc.
Revised July 2004

3 & 7

03550 Concrete Topping
07570 Traffic Topping

Reinforcing Steel

Clean the reinforcing steel and apply two coats of *Fibre-Prime* as rustproofing layer.

Patch deeper holes - over 9 mm (3/8") with *Fibre-Patch OV*.

Crack Treatment

All cracks in the substrate must be treated in advance, by cutting out a groove approx. 6 cm (2 1/2") wide x 4 cm (1 1/2") deep and fill it with *Fibre-Patch OV*.

Gem-Crete TO ST must not be applied over any moving cracks or joints. Gemite will not be responsible for any cracks or issues that may develop due to movement of existing cracks or joints, after the installation of *Gem-Crete TO ST*.

Priming

Prime the surface with Primer # 410 and let dry until it is clear, but still tack free.

Mix Design	Metric	US
<i>Gem-Crete TO ST</i> Premix	22.7 kg	50 lb
Water	5.0-5.2 L	1.3-1.4 USG

Mixing

Use a paddle or helix screw type mortar mixer. Place most of the water into the mixer, and gradually add the dry material, while mixing - mix thoroughly until completely free of lumps. Adjust the water for suitable workability. Do not over mix.

Measure the mixing water, do not eyeball it - DO NOT OVER WATER. Excess of water is indicated by sever bleeding & sand sedimentation.

Convey mixed material to the placement are in uncontaminated, clean containers.

The flow time is approximately 15-20 minutes, depending on the temperature and relative humidity.

Application

Pour *Gem-Crete TO ST* on the prepared and primed surface, and use a spreader to obtain an even, smooth, leveled surface.

Thickness of Application

Gem-Crete TO ST can be applied in thickness from 6 mm (1/4") to 25 mm (1") in one coat.

For thicker applications extended *Gem-Crete TO ST* with well graded washed 9 mm (3/8") pea gravel by blending together 1:1 volume of *Gem-Crete TO ST* and pea gravel.

The maximum aggregate size must not exceed 1/3 of thickness of the applied layer.

The surface will not be straight after placement and will require app thin, 6 mm (1/4") coat of *Gem-Crete TO ST* - the surface must be primed again using *Primer #410*.

Curing

Air dry cure for 2-3 days. Protect against rapid evaporation, or plastic shrinkage cracking may occur.

When working under tarps at freezing temperatures, use electrical heaters. Avoid using propane heaters to prevent "carbonation" of the material.

Coating/Sealers

Gemite offers a number of sealers and coatings, which provide an additional protection or color needed. Curing of *Gem-Crete TO ST* may have to be extended if sealer / coating is used. Please contact Gemite Technical Service for advice.

Clean Up

All tools must be cleaned with water immediately after use. Cured material can only be removed mechanically.

AVAILABILITY AND COST

Gem-Crete TO ST is available worldwide. Contact Gemite for the name of the nearest Representative / Distributor.

MAINTENANCE

None required.

WARRANTY

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

TECHNICAL SERVICE

For technical advice on suitability of *Gem-Crete TO ST* for specific project, specification assistance & application advice, please contact Technical Service, USA (888) 443-6483 / Canada (905) 672-2020.

Short Specification

The self-leveling exterior topping (concrete surfacing) will be *Gem-Crete TO ST*, polymer modified mortar manufactured by Gemite Products Inc., (888-443-6483 (USA) or 905-672-2020 (Canada).