

PRODUCT NAME

Fibre-Patch™ ST

Non-Shrink Horizontal Concrete Patch



MANUFACTURER

Gemite® Products Inc.

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FEATURES

- Shrinkage Compensated
- One component = Uniform results
- Easy-to-use = Add water only
- High early strength
- Long term crack-free
- Tough & Abrasion resistant
- Superior freeze-thaw durability
- Breathable
- Excellent bond strength
- VOC free & Nonflammable
- Resistant to deicing salt

PRODUCT DESCRIPTION

Basic Use

Patching & resurfacing of parking decks, industrial, warehouse, ramps, loading docks, balconies and elevated walkways.

Fibre-Patch ST is suitable for exterior & interior horizontal concrete surfaces.

It resists hydrostatic pressure when cured and can be applied to rough and damp surfaces from a minimum of 6 mm (1/4 in) to any thickness.

Easily applied by screed or trowel, and can also be sprayed.

Composition and Materials

Fibre-Patch ST is a shrinkage compensated, fibre-reinforced, polymer-modified & silica-fume enhanced cementitious mortar. It is supplied as a Premix or Concentrate.

Limitations

For clean and sound horizontal concrete surfaces only. Do not use *Fibre-Patch ST* over moving joints or cracks. Do not apply over active leaks. Do not apply *Fibre-Patch ST* when the temperature is expected to be below 4°C (40°F) within 24 hours, or when rain is imminent. Follow Hot Weather concreting precautions when applying *Fibre-Patch ST* at temperatures exceeding 25°C (77°F), or under sunny and windy conditions. Minimum applied thickness is 6 mm (1/4 in).

Health and Safety

Fibre-Patch ST is nontoxic & nonflammable. Your skin might be sensitive to cement. We recommend use of rubber gloves. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water. Seek medical advice if irritation occurs. Harmful if digested. Keep product out of reach of children. **FOR INDUSTRIAL USE ONLY.** Consult SDS for additional information.

Color

Dark Gray.

Packaging

Fibre-Patch ST Premix is packaged in 22.7 kg (50 lb) bags.

Fibre-Patch ST Concentrate is packaged in 13 kg (28 lb) bags.

Yield

Fibre-Patch ST Premix yields 12.2 L (0.43 ft³) & covers approx. 2.0 m² @ 6 mm (20.6 ft² @ 1/4") thickness per bag.

Fibre-Patch ST Concentrate, when mixed with correct amount of sand, water & cement, yields 74 L (2.8 ft³) & covers approx. 12.3 m² @ 6 mm (134 ft² @ 1/4") thickness 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

Fibre-Patch ST, when stored on pallets in a dry, cool area has a shelf-life of 12 months. Packaged 55 bags per pallet (*Premix*) or 60 bags per pallet (*Concentrate*).

TECHNICAL DATA (Premix)

Modulus of Rupture (ASTM C348)	1200 - 1500 psi (8.27 - 10.34 MPa)	
Compressive Strength Development (ASTM C 109-90)		
Time	psi	MPa
24 hours	1800-2100	12.41-14.48
3 days	3000-3300	20.68-22.76
7 days	4800-5100	33.10-35.17
28 days	7000-7200	48.27-49.65
Slant Shear Strength (ASTM C882)	3320 psi	22.9 MPa
Water Absorption (MT Ontario)	4.8%	
Rapid Chloride Penetration (ASHTO T277)	483 Coulombs	
Salt Scaling Resistance (ASTM C672)	Excellent	
Freeze/Thaw Durability (ASTM C666 Procedure A)	Less than 1% loss	

Gemite Products Inc.
July 1998

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03 01 30.71 Rehabilitation of Cast-in Place Concrete

INSTALLATION

Current Guide Specification & Application instructions contain information specific to each application and must be followed. Contact Gemite's Technical Service for information specific to your application.

Surface Preparation

Remove all loose and oil, or grease, contaminated concrete, and sandblast, shotblast or high pressure waterblast min. 55-68 MPa (8-10,000 psi) to remove form release agents, laitence, dirt, and other bond inhibiting materials to achieve sound concrete with exposed fractured aggregate and a surface profile of 3 mm (1/8 in).

Vertical edge of 6 mm (1/4 in), or more, must be created around the perimeter of the patch by saw cutting and chipping.

Reinforcing Steel

Remove concrete behind the rebar steel to 25 mm (1") depth. Remove loose rust from the surface of the reinforcing steel and apply two coats of *Fibre-Prime* rustproofing.

Mix Design	Metric	US
<i>Fibre-Patch ST Concentrate</i>	13 kg	28 lb
Portland Cement, Type 1 (GU)	40 kg	94 lb
Masonry or Concrete Sand	100 kg	235 lb
Water	18.5 L	5.2 USG
<i>Fibre-Patch ST Premix</i>	22.7 kg	50 lb
Water	3.9 L	1.0 USG

Aggregate Extension

For areas deeper than 25 mm (1") add 9 mm (3/8") clean, washed pea gravel in the following quantities:

<i>Fibre-Patch ST Concentrate</i> (per 1 unit)	52 kg	115 lb
<i>Fibre-Patch ST Premix</i> (per 1 bag)	7 kg	16 lb

Mixing

Concentrate

Use rubber tipped paddle mortar mixer. Place approximately 16 L (4.2 USG) of water into the mixer. Open *Fibre-Patch ST Concentrate*, and remove separately packaged plastic bag of fiber. Add the powder into the water, while mixing, followed by sand & cement, and mix until free of lumps. Add the fibers gradually and mix for 1 minute to fully disperse. Adjust the water to obtain trowelable consistency.

Premix

Use a heavy duty drill (400 - 600 RPM) with a mixing paddle. Place 3.5 L (0.9 USG) of water into a clean pail & gradually add dry material while mixing. Adjust the water for trowelable consistency. Working time is 40-45 minutes - it will decrease with hot & increase with cold weather. Do not retemper or add any admixtures. Do not overmix (4-5 minutes maximum).

Application

The surface should be saturated surface damp. Apply a slurry coat of *Fibre-Patch ST* by scrubbing into the substrate. If the slurry dries out, reapply it before the application of *Fibre-Patch ST*. Fill the patch by placing *Fibre-Patch ST* full depth from one end to the other eliminating lifts between batches. Spread evenly with a hoe or screed. Force material against the bottom and sides of the patch and compact well. Finish with steel trowel. Do not over-trowel.

Allow *Fibre-Patch ST* to set and finish with a wood or sponge float for a smooth surface, or broom or burlap drag for rough finish. Do not feather edge.

Curing

Protect against rapid surface evaporation & from excessive old or heat, below 4°C (40°F) or above 20°C (70°F). Water misting, wet burlap or non-solvent surface evaporation retardant should be used as cure for 24 hours for best results.

For repairs 25 mm (1 in) and over, follow ACI recommendations for concrete curing. Protect from rain and freezing. In 24-48 hours after application, *Fibre-Patch ST* floor may be open to normal use. For heavy traffic areas a longer curing period may be required.

Clean Up

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

AVAILABILITY AND COST

Fibre-Patch ST is available worldwide. Contact Gemite Products Inc. for the nearest Representative / Distributor and pricing.

MAINTENANCE

None required.

WARRANTY

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

TECHNICAL SERVICE

For technical advice on suitability of *Fibre-Patch ST* for specific application, specification assistance & application instructions, contact Gemite Technical Service: USA 888-443-6483 or Canada 905-672-2020.

Short Specification

The concrete restoration material will be *Fibre-Patch ST*, shrinkage compensated, crack resistant, fibre-reinforced, polymer-modified and microsilica enhanced mortar manufactured by Gemite Products Inc., [USA 888-443-6483] [Canada 905-672-2020]. It will be mixed and applied according to manufacturer's specifications and recommendations.