



SILSPEC® FLEXPATCH Polymer Patching Mortar

DESCRIPTION

SILSPEC® FLEXPATCH is a three-component, 100% solids, multi-purpose, high-strength, non-shrink, waterproof, non-conductive, semi-flexible polymer patching mortar for longer lasting patches with excellent workability. The system combines a high quality polymer resin and curing agent with SILSPEC® BLENDED AGGREGATE.

USE

Repair of delaminations and potholes on bridges, roadways, airport runways, parking and garage decks. SILSPEC® FLEXPATCH is also used to repair joint edge spalls and corner-breaks on pavements. SILSPEC® FLEXPATCH conforms to ACPA Bulletin TB003P for use in partial depth pavement repairs.

FEATURES

- ◆ Specifically engineered to provide a superior patch while demonstrating physical characteristic similar to the concrete substrate
- ◆ Convenient mixing: all components premeasured
- ◆ Rapid Curing

PROPERTIES

Shelf Life: 2 years when stored properly in unopened containers.
Storage Conditions: Store at 50°F to 90°F.

Compressive Strength ASTM C579	PSI @ 4 hrs (Method B)	1,500 Min
	PSI @ 24 hrs	4,500 Min
Bond Strength ASTM C882	PSI	2,500 Min
Linear Shrinkage ASTM C531	Percent	Negligible
Abrasion Resistance ASTM C501	Weight Loss H-22 grams	1.0 Max
Chloride Ion Permeability AASHTO T277	Coulombs	1.0 Max
Thermal Compatibility ASTM C884	Pass	Pass

Condition at 65°F to 80°F before mixing.

COMPLIANCE

FAA Specification P501-4.19
ASTM C881, Type III, Grade 1, Class B & C
Meets USDA Specifications for use in food processing areas.
VOC Compliant

PACKAGING & YIELD

*SILSPEC® BLENDED AGGREGATE

Kit Yield	Components
0.5 cu ft (.014 cu m) Kit	1 gal liquid, 1 bag aggregate*
1.0 cu ft (.028 cu m) Kit	2 gal liquid, 2 bags aggregate*
5.0 cu ft (.140 cu m) Kit	10 gal liquid, 10 bags aggregate*

INSTALLATION PROCEDURES

Surface Preparation

Step 1: Remove all unsound substrate with chipping hammers or other appropriate hand tools. Chipping hammers should not exceed 30 lbs.
Step 2: Thoroughly clean patch area by sandblasting. All exposed reinforcing steel should be blasted to white metal finish. Blow all dust and loose particles from patch area with oil/moisture free compressed air. Sandblasting and blowing equipment should be equipped with oil/moisture traps.

Concrete surface should be clean, dry (SSD) and frost free for optimal results.

Steel:

Sandblast to white metal finish.

Step 3: If the patch is located adjacent to an expansion or construction joint, a form must be installed in the patch to extend the joint.

Mixing of Liquid Components

Condition at 65°F to 80°F before mixing.

Premix each component separately then place 1 part by volume component A and 1 part by volume part B into a clean mixing container and mix with a heavy-duty low speed (400-600 rpm) drill and jiffy mixer for 3 minutes. Add the appropriate amount of SILSPEC® BLENDED AGGREGATE to the mixing container and mix thoroughly. Prior to dumping the mix, check to see there are no dry pockets of aggregate in the container. Larger batches (1 cu ft plus) of SILSPEC® FLEXPATCH can be batched in smooth-sided tubs or gas powered mortar mixers.

For small batches of material blend 1 part by volume of mixed liquid to 3.5 parts by volume of aggregate.

For patches less than 1" in depth, 10% of the normal amount of aggregate should be withheld from the mix.

Placing Mixed Material

Pour the mixed SILSPEC® FLEXPATCH into the prepared patch area and screed or float to the desired level. Thoroughly compact with a trowel or the end of a short length of 2X4. Finish with a steel trowel, pay special attention to the patch edges being sure to "pull" the mortar to the edge. If further skid resistance is desired, broadcast aggregate into the wet surface and "pat-in".

Patching Bridge Decks

These instructions are for a typical installation of SILSPEC® FLEXPATCH on a bridge deck using common construction tools and equipment.

Step 1: Use a chain drag to determine the outer limits of the area to be patched.

Step 2: Remove all unsound substrate with a chipping hammer. Chipping hammers should not exceed 30lb. Unless approved by the project engineer.

If desired, saw the perimeter of the patch to "square it up". As with all patching materials, avoid making interior 90° corners in the patch.

The substrate removal should be deep enough to remove all unsound concrete. If there is sound concrete at the rebar level, the patch depth can stop there. If there is ANY doubt about the soundness of the concrete beneath the rebar—take it out.

Step 3: After chipping out the patch, remove the debris and ensure all unsound substrate has been removed.

Step 4: Sandblast the patch. Any exposed steel should be blasted to SP-10 (near white), concrete shall be clean. Blow the repair area with oil/moisture free compressed air to remove debris from the sandblasting operation. Be sure sandblasting and blowing equipment is fitted with oil/moisture traps to remove contaminants.

Step 5: Mix SILSPEC® FLEXPATCH per directions and place into prepared patch area.



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Patching Bridge Decks Continued:

Step 6: Finish the SILSPEC® FLEXPATCH with a steel trowel and use a screed board to check surface profile with the surrounding deck surface. Use a short 2X4 to compact the SILSPEC® FLEXPATCH when placing to aid in compaction of the mortar. If desired, broadcast aggregate on to the surface of the mortar to aid in skid resistance.

Step 7: Allow the newly repaired patch to cure before opening to traffic (see chart below).

Temperature	Working Time	Initial Cure Time*
50°F	40 min	12 hrs
60°F	30 min	8 hrs
70°F	25 min	4 hrs
80°F	20 min	3 hrs
90°F	15 min	2 hrs
100°F	10 min	1.5 hrs

* Compressive Strength Reaches approximately 1,000 psi

CLEAN UP

Clean tools and equipment immediately after use with Xylene or a citrus cleaner. Cured material must be mechanically removed.

CAUTION—Xylene IS FLAMMABLE and all safety codes and regulations governing its use must be observed.

MATERIAL SPILL

Collect with absorbent material. Dispose of in accordance with local, state and federal disposal regulations.

FOR CHEMICAL EMERGENCY CALL
1-800-842-9300
24 hours per day, 7 days per week.

CONTACT

Contact SSI for further information of installation instructions.

PRECAUTIONS

It is the users responsibility to familiarize themselves with all safety precautions prior to use. A product SDS is provided upon request by contacting SSI at (800)888-8909.

- ◆ **Component A— Irritant**
- ◆ **Component B— Corrosive**
- ◆ **Product is a strong sensitizer**
- ◆ **Use with adequate ventilation**
- ◆ **Use of a NIOSH/MSHA organic vapor respirator is recommended if ventilation is inadequate**
- ◆ **Wear protective clothing, gloves and eye protection (Goggles, Safety Glasses and/or Face Shield)**
- ◆ **Keep out of reach of children**
- ◆ **Do not take internally**
- ◆ **In case of ingestion, seek medical help immediately**
- ◆ **May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed**
- ◆ **If eye contact occurs, flush immediately with clean water and seek medical help as needed**
- ◆ **Dispose of waste material in accordance with local, state and federal requirements**
- ◆ **Cured epoxy resins are innocuous**

LIMITATIONS

FOR PROFESSIONAL USE ONLY

Apply to dry and fully cured (28 days) concrete only.

Do not thin with solvents.

Surface, ambient air and material must 50F (10C) or above.

Do not expose stored or uncured product to cold or freezing temperatures below 35°F (2°C) for any length of time.

NOTE: High temperatures will accelerate the setting. As a general rule, the gel time of epoxy will be cut in half for each 10° to 15° increase in temperature above 75°F (24°C).

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