



HIGHWAY • AIRPORT • BRIDGE

SILSPEC® RE-DECK *Bridge and Pavement Wearing Course*

DESCRIPTION

SILSPEC® RE-DECK is a solvent free, moisture tolerant, low viscosity epoxy/urethane binder and adhesive meeting the requirements of ASTM C-881, Type III, Grade I, Classes B & C.

USE

SILSPEC® RE-DECK is used primarily for bonding skid-resistant overlays and high friction surfaces to bridges and elevated slabs and as a low modulus binder for epoxy mortars where thermal change is a consideration. The material can also be used to seal interior and exterior above grade slabs and as a low modulus crack filler.

ADVANTAGES

- ◆ Low modulus, high strength adhesive meeting ASTM C881 Type III Requirements
- ◆ Moisture tolerant
- ◆ Can be used as a High Friction Surface
- ◆ V.O.C. Compliant
- ◆ Shock absorbing ability
- ◆ Can be used with aggregates for mortar repairs

PROPERTIES

Meets Specification: ASTM C881, Type III, Grade I, Classes B & C
 Mix Ratio: 1:1, by volume
 Gel time– ASTM D-2393, 60 gm sample @ 73°F (23°C): 15 min.
 Color (mixed)- Dark Amber
 Viscosity– 1,500 cps
 Final Cure– 7 days
 Compressive modulus– ASTM D-695: 80,000 psi (551.1 MPa)
 Bond Strength– ASTM C-882: 14 days 3,200 psi (22.1 MPa)
 Tensile Strength– ASTM D-638: 3,000 psi (20.7 MPa)
 Elongation at Break– ASTM D-638: 50.0%
 Water Absorption- ASTM D-570: 0.20%
 Thermal Compatibility- Passes Test
 AASHTO T-222 Chloride Ion Permeability 0.9 Coulombs

VOC

SILSPEC® RE-DECK has a VOC content of 0g/L. Compliant with all US VOC regulations including Federal EPA, OTC, LADCO, SCAQMD & CARB.

STORAGE

Store material between 40°-95°F (5°-35°C).
 Shelf life of properly stored, unopened containers is 24 months.

PACKAGING

2 gal/7.6L units (2– 1 gal cans) 10 gal/37.9L (2– 5 gal pails)
 110 gal/416.4L units (2-55 gal drums)

ESTIMATING GUIDE

Broadcast Overlays & Epoxy Mortar

Minimum Epoxy & Aggregate Coverage Rates		
	Epoxy Rate	Aggregate Rate
COURSE 1	1 gal/40 sq ft minimum (1L/m ²)	10 lbs / sq yd (5.4 kg/m ²)
COURSE 2	1 gal/20 sq ft minimum (2L/m ²)	14 lbs / sq yd (7.6 kg/m ²)
Mortar Coverage Rates		
	Mixed Epoxy/Aggregate Rate	
	1 gal/808 cu in (3.8L/317 cu cm)	

APPLICATION

Surface Preparation: Surface to be bonded must be clean and sound. Surface should be visibly dry. No standing water. Concrete moisture levels must be less than 5% when measured with a multi-pin moisture meter.

Remove dust, laitance, grease, curing compounds, impregnations and other contaminants. Concrete surfaces should be shot blasted to a CSP 3-5 per ICRI.

Mixing: Condition material to 65°-85°F (18°-29°C) for ease of mixing and optimum flow prior to using. Premix each component then place 1 part by volume and 1 part by volume of component B into a clean pail and mix for 3 minutes with a low speed drill using a jiffy mixer or paddle until uniformly blended. Mix only what can be used within the pot life.

PLACEMENT

Epoxy/Urethane Overlays: Repair all delaminations, potholes and cracks using SILSPEC® RE-DECK or SILSPEC® FLEXPATCH. Mix the epoxy as previously directed and apply course #1, spreading the neat SILSPEC® RE-DECK at a coverage rate of 40 ft²/gal. [1 m²/L] using a (3/16) notched squeegee; immediately broadcast select aggregate to refusal (typically 1-1.5 lb/ft², 4.88 –7.32 kg/m²). The aggregate* should be angular grained silica sand or basalt having less than 0.2% moisture and free of dirt, clay and all impurities. The aggregate* should have a minimum MOHS scale hardness of 7 unless otherwise approved. After the initial cure of the first course, remove all excess aggregate and apply course #2, spreading the neat SILSPEC® RE-DECK at a coverage rate of 20 ft²/gal.(0.5 m²/L), once again broadcasting the select aggregate to the point of refusal.

After allowing the system to cure (2.5 hrs for course #1 and 4 hrs for course #2) @ 70°F (22°C) and after all the loose aggregate has been removed it can be opened to traffic.

Minimum Curing Times of SILSPEC® RE-DECK

	Average Temperatures of Overlay Components & Substrate					
	60-64°F 16-18°C	65-69°F 19-21°C	70-74°F 22-23°C	75-79°F 24-26°C	80-84°F 27-29°C	85+°F 29+°C
Min. Cure Time Course 1	4 hrs	3 hrs	2.5 hrs	2 hrs	1.5 hrs	1 hr
Min. Cure Time Course 2	6-5 hrs	5 hrs	4 hrs	3 hrs	2.5 hrs	2.5 hrs

HIGH FRICTION SURFACE APPLICATION

SILSPEC® RE-DECK can be utilized in HIGH FRICTION SURFACE APPLICATIONS, contact Silicone Specialties, Inc. for specific recommendations regarding use and installation for on-grade installations.

EPOXY/URETHANE MORTAR

SILSPEC® RE-DECK when mixed with SILSPEC® BLENDED AGGREGATE can be used as low modulus mortar to repair potholes prior to installation of EPOXY/URETHANE OVERLAYS. Mix the mortar by adding 3.5 to 5 parts of aggregate to one part pre-mixed SILSPEC® RE-DECK and then mix thoroughly to completely wet all of the aggregate. Prime the substrate using neat SILSPEC® RE-DECK then apply the mortar by trowel or screed while the primer is still tacky. Also available for patching prior to overlay is SILSPEC® FLEXPATCH, a prepackaged epoxy repair mortar.

At 73°F (23°C) gel time is 15 minutes. Final cure is 7 days. Patches should be allowed to set prior to overlay installation.

* See Aggregate Chart on page 2 for type and gradation.



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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 or installation instructions.

LIMITATIONS

FOR PROFESSIONAL USE ONLY

Always test a small amount of SILSPEC® RE-DECK to ensure the product is mixed properly and thoroughly and that the material will harden properly before proceeding with installation.

Concrete surfaces must be less than 5% moisture content when tested with a moisture pin meter. On wood and other surfaces contact the manufacturer for more information.

Surface and ambient temperature must be a minimum of 50°F (10°C) for application.

Do not thin with any solvents.

Epoxies may yellow, discolor, or chalk upon exposure to strong sources of Ultra-Violet radiation such as sunlight and some types of industrial artificial lighting.

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).

Aggregate Size Chart

1. Aggregate shall be bauxite and/or flint having less than 0.2% moisture and free of dirt, clay, ect. 2. The bauxite and flint shall have a minimum MOHS scale hardness of 7 unless otherwise approved. 3. The bauxite and flint shall conform to the following gradation:			
PERCENT BY WEIGHT PASSING INDICATED SEIVE			
No. 4 Sieve	No. 8 Sieve	No. 16 Sieve	No. 30 Sieve
100%	20-75% Max.	5% Max.	1%

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
- ◆ 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

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For Purchase, contact SSI at the following locations:

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 HOUSTON TX– SABINE, (713)862-3900 • HOUSTON– BLAYLOCK, (713)460-8800 • AUSTIN TX (512)326-1156 • SAN ANTONIO TX (210)930-6360 • EL PASO TX (915)591-6800 • MCALLEN TX (956)782-1341
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