



# SRS-3000

## Low Viscosity, High Strength Crack Repair

### Tests and Standards for SRS-3000

- Compressive Strength: Tested to 11,000 psi (ASTM D695)
- Tensile Strength: Tested to 7,500 psi (ASTM D638)
- Bond Strength: Tested to 2,200 psi (ASTM C882)
- Shrinkage: Less than 0.2% (ASTM D2566)
- General Compliance: Conforms to ASTM C881-20 specifications.

## STRUCTURAL CRACK INJECTION EPOXY

### Approvals and Certifications for SRS-3000

- NTPEP Approved: Evaluated and approved by the National Transportation Product Evaluation Program.
- USDA Acceptance: Suitable for use in USDA inspected facilities.

24 Month Shelf Life

1:1 Mix Ratio



MADE IN THE USA

[Structuralrs.com](http://Structuralrs.com)

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**SRS** **STRUCTURAL**  
REINFORCEMENT SOLUTIONS

SRS-3000 is a low viscosity, moisture-insensitive epoxy designed for structural crack repair. It is formulated for use in cracked concrete and can be applied in various environments, ensuring reliable performance in dry, damp, or water-filled conditions.

## APPLICATIONS

- Structural crack repair in concrete.
- Anchoring injection ports.
- Filling voids in cracked concrete.
- Suitable for use in horizontal, vertical, or overhead applications.

## APPLICATION INSTRUCTIONS

1. Surface Preparation: Ensure the crack surface is clean, dry, and free of contaminants.
2. Mixing: Mix Part A (Resin) and Part B (Hardener) thoroughly in the specified ratio.
3. Application: Inject the mixed epoxy into the crack using appropriate injection equipment. Ensure complete penetration for effective repair.
4. Curing: Allow the epoxy to cure according to the cure schedule.

## CURE SCHEDULE

- Gel Time: 6-10 minutes at 70°F (21°C)
- Full Cure: 24 hours at 70°F (21°C)
- Service Temperature Range: -10°F to 120°F (-23°C to 49°C)

## PHYSICAL PROPERTIES

- Compressive Strength: 11,000 psi (ASTM D695)
- Tensile Strength: 7,500 psi (ASTM D638)
- Bond Strength: 2,200 psi (ASTM C882)
- Shrinkage: <0.2% (ASTM D2566)

## TECHNICAL DATA

- Mix Ratio: 2:1 (Resin: Hardener) by volume.
- Color:
  - Part A (Resin): Light Yellow
  - Part B (Hardener): Amber
  - Mixed Color: Light Yellow
- Viscosity: Low viscosity for deep penetration.
- Pot Life: 20-30 minutes at 70°F (21°C).
- Full Cure Time: 24 hours at 70°F (21°C).

## STORAGE AND SHELF LIFE

- Storage Temperature: 41°F to 77°F (5°C to 25°C)
- Shelf Life: 18 months when stored in unopened containers in dry conditions.

## FEATURES AND BENEFITS

- Low Viscosity: Ideal for pressure injection or self-leveling applications for structural repair of concrete cracks ranging from 1/8 inch to less than 1/4 inch.
- NTPEP Approved: Evaluated and approved by the National Transportation Product Evaluation Program.
- USDA Acceptance: Suitable for use in USDA inspected facilities.
- Moisture Insensitive: Effective performance in wet conditions.
- Versatile Usage: Acts as an epoxy resin binder for mortar repair, patching, and overlaying interior surfaces including aggregates.
- Sealer Capabilities: Effective as a sealer for interior slabs and exterior above-ground slabs, decks, patios, driveways, parking garages, and other structures.
- Shear Fracture Repairs: Suitable for repairing shear fractures on both interior and exterior concrete slabs.
- Industrial Primer: Can be used as a primer for industrial coatings.
- Surface Sealant: Applicable as a surface sealant for various surfaces.

## SAFETY AND HANDLING

- Use protective gloves and eyewear during mixing and application.
- Ensure adequate ventilation during use.
- Refer to the Safety Data Sheet (SDS) for detailed health and safety information.

## LIMITATIONS

- Do not thin with solvents as this will prevent proper curing.
- For best results, the concrete should be a minimum of 21 days old prior to application.
- Ensure the substrate and ambient air temperature are within the specified application range.

## PACKAGING

- Available in 15.9 fl. oz (470 ml) cartridges.

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## Low Viscosity Epoxy Resin for Structural Crack Injection

### SPECIFICATION:

The concrete repair adhesive shall be a two-component, 2:1 mix ratio epoxy system supplied in premeasured containers. When cured 7 days and at a minimum temperature of 60 °F (16 °C), shall have a minimum compressive yield strength of 10,150 psi (70.0 MPa) per ASTM D695. The concrete repair adhesive shall be SRS-3000 Crack Injection Epoxy from Structural Reinforcement Solutions, Thornville, Ohio.

TABLE 1: SRS-3000 LV WORKING TIME <sup>1,2,3,4</sup>

Base Material Temperature °F (°C)	Working Time
50 (10)	45 min
75 (24)	30 min
100 (38)	22 min

1. Working times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge / nozzle system performance.
2. Application Temperature: Substrate and ambient air temperature should be from 50 °F to 100 °F (10 °C to 38 °C).
3. When ambient or base material temperature falls below 70 °F (21 °C), condition the adhesive to 70 - 75 °F (21 - 24 °C) prior to use.
4. Working time will increase (colder) or decrease (warmer) depending on temperature.

TABLE 2: SRS-3000 performance to ASTM C881-20 <sup>1,2,3</sup>

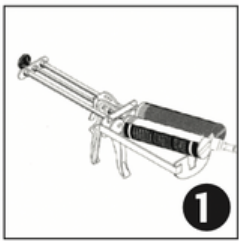
Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature 60° (16°) Class
Gel Time - 60 Gram Mass <sup>4</sup>	----	C881	min	27
Viscosity			cP	500
Pot Life <sup>5,6</sup>		----		min
Compressive Yield Strength	7 day	D695	psi (MPa)	10,150 (70.0)
Compressive Modulus			psi (MPa)	300,000 (2,068)
Tensile Strength		D638	psi (MPa)	7,230 (49.8)
Tensile Elongation			%	4.4
Bond Strength Hardened to Hardened Concrete	2 day	C882	psi (MPa)	1,580 (10.9)
	14 day		psi (MPa)	2,950 (20.3)
Bond Strength Fresh to Hardened Concrete	14 day		psi (MPa)	1,720 (11.9)
Heat Deflection Temperature	7 day	D648	°F (°C)	120 (48.9)
Water Absorption	14 day	D570	%	0.3
Linear Coefficient of Shrinkage	48 hr	D2566		0.0003



1. Working times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge / nozzle system performance.
2. Application Temperature: Substrate and ambient air temperature should be from 50 °F to 100 °F (10 °C to 38 °C).
3. When ambient or base material temperature falls below 70 °F (21 °C), condition the adhesive to 70 - 75 °F (21 - 24 °C) prior to use.
4. Working time will increase (colder) or decrease (warmer) depending on temperature.

## SURFACE PREPARATION

- Surface preparation is crucial and depends on the application of the product. For old concrete, ensure it is clean and profiled or textured. New concrete should be at least 28 days old. Remove all dirt, oil, debris, wax, grease, and dust. Prepare the surface mechanically using a scarifier, sandblast, shotblast, or other equipment to achieve the necessary surface profile for application. A roughened surface is imperative for good adhesion. Ensure the bonding surfaces are prepared in advance before starting a new cartridge or mixing product. If possible, schedule dispensing to use an entire cartridge at one time without interrupting epoxy flow. For bulk mixing, only mix enough product to use within the pot life (refer to the product's pot life in the technical data).



## CARTRIDGE PREPARATION

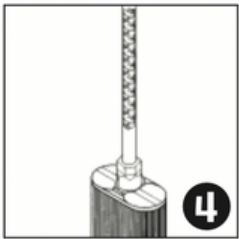
**CAUTION:** Check the expiration date on the cartridge to ensure it is not expired. Do not use expired products! Insert the cartridge into the dispenser, making sure it is properly positioned with the shoulder of the cartridge flush with the front top bracket of the dispenser. Point the cartridge upward at about a 45° angle. Remove the plastic cap and plug from the top of the cartridge.



While pointing the cartridge upward and away from yourself and others, slowly apply pressure to the dispenser to move any bubbles and product up through the cartridge until both products flow out evenly. The cartridge is now purged or balanced and ready for flow controller installation.



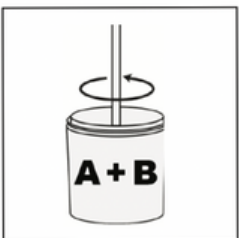
The SRS-3000 Low Viscosity Epoxy Injection Resin uses a flow controller located inside the threaded end of the mixing nozzle and secured by a plastic cap. Insert the flow controller into the top of the threaded end of the cartridge where the product will dispense and ensure it is securely seated. Install the mixing nozzle onto the cartridge. Holding the dispenser straight up, slowly apply pressure to the dispenser to move any bubbles and product up through the nozzle until the product reaches the tip. Tilting only slightly, dispense this first full stroke of material into a disposable container. The cartridge is now ready for use.



**NOTE:** Schedule dispensing to consume an entire cartridge at one time without interruption of flow to prevent material from hardening in the mixing nozzle. Replace the nozzle if problems occur while dispensing the product, as the product may have begun to cure in the nozzle, which will affect the mix ratio. Never transfer a used nozzle to a new cartridge. Repeat the cartridge balancing steps after replacing the nozzle.

## BULK MIXING INSTRUCTIONS

- Thoroughly stir each component separately before mixing together. Mix only the amount of material that can be used before the working time expires. Proportion parts by volume into a clean pail at the exact and proper mix ratio - 2 parts by volume of Component A and 1 part by volume of Component B. Mix thoroughly with a low-speed drill (400–600 rpm) using a mix paddle attachment such as a Jiffy Mixer. Carefully scrape the sides and the bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 minutes.







## PORT ATTACHMENT

**Note:** Observe cure times for the capping paste before beginning the crack injection process. Use a plastic putty knife to apply capping paste to the outer half of the port base. Ensure that the port passageway is not obstructed or blocked during the application. Place the coated port over the prepared gap using a slight twisting motion, securing the port and centering it directly over the gap. Check for voids or pinholes between the installed ports and the substrate being injected, and seal as necessary.

Use SRS-2100 Concrete Repair as a capping paste to seal the crack on the outside. Follow the cartridge preparation instructions to prepare the cartridge. After balancing the cartridge and disposing of the initial amount, apply the epoxy repair paste over the crack, leaving spaces for port installations approximately 6 to 12 inches apart. Press the epoxy repair paste into the crack facing and smooth with a putty knife. It is recommended to apply at least 1 to 2 inches wide along the crack facing through the length of the crack.



## CAPPING PASTE FOR CRACK INJECTION

- Follow the crack injection product instructions for horizontal, vertical, and overhead installations. Using a wire brush, vigorously clean the crack and the surface surrounding it, ensuring the crack is not plugged with any semi-loose debris. Remove all dust, debris, oil, and contaminants from the crack by blowing it out with clean, oil-free compressed air. For best results, the crack must be dry at the time of injection. If water is seeping from the crack, take steps to stop the water flow to achieve the desired repair.

## GRAVITY FEED CRACK REPAIR FOR HORIZONTAL APPLICATIONS

- For best results with SRS-3000 Low Viscosity Epoxy Injection Resin, cut a groove to open up the crack using an abrasive or diamond blade to a width of 1/8 in. (3.2 mm) and a minimum depth of 3/8 in. (9.5 mm). Use a wire brush to abrade the crack, then blow out all dust, dirt, grease, wax, oil, or other contaminants. Pour or inject SRS-3000 into the crack, utilizing its self-leveling ability to fill the entire area. Repeat the application if necessary to completely fill the crack. Follow the cartridge preparation set-up. For medium-sized cracks, use a thicker epoxy variant if available



DO NOT dispense epoxy through a gelled mixing nozzle. If epoxy gels in the nozzle, replace the nozzle and balance the new cartridge before continuing

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## LOW PRESSURE CRACK INJECTION FOR VERTICAL, HORIZONTAL, AND OVERHEAD STRUCTURAL REPAIR

- Before repairs, examine the crack to determine the required repair type. Cracks in concrete and wood members are either dynamic (moving) or static (dormant). Static cracks may occur from a one-time overload event such as an earthquake or flood.
- For static cracks in a structure to be rehabilitated, structural crack injection is recommended. In contrast, dynamic cracks are caused by inadequate design, seasonal heaving, temperature swings, or repeated overloading. Dynamic cracks CANNOT be effectively repaired using crack injection. Instead, dynamic cracks should be sealed using a flexible repair material.



## Bonding Agent Applications

- When bonding fresh concrete to hardened concrete or as a bonding agent for repairing concrete spalls: Using a brush, roller, or airless sprayer, apply an even coat of the bulk mixed SRS-3000 Low Viscosity Epoxy Injection Resin to the clean and prepared concrete surface. While the epoxy is still tacky, place fresh concrete over the top of the mixed epoxy.

## SPALL REPAIR APPLICATIONS

- To avoid a feathered edge, cut around the spall into sound concrete with a grinder or circular saw using a diamond or concrete abrasive blade. The edge cut should be equal to the maximum depth of the spall or at least a minimum depth of 3/4 inch (19 mm). Chip out all loose concrete within the entire spall to a minimum depth of 3/4 inch (19 mm). Follow the surface preparation instructions above to clean the spall. Estimate the amount of bulk product needed and mix Part A and Part B in a 2 to 1 volume ratio. Mix Parts A and B thoroughly. Slowly add 3-4 parts by volume of kiln-dried sand or aggregate of choice and mix well, pour and trowel until smooth/level.

**Note:** The low viscosity of the SRS-3000 Low Viscosity Epoxy Injection Resin will aid in wetting out aggregate to create a repair mortar. Maximum mortar thickness is 1.5 inches (38 mm) per lift.

## PUMP AND PNEUMATIC DISPENSING

**CAUTION:** DO NOT EXCEED 40 psi (0.28 MPa) PRESSURE TO THE PNEUMATIC DISPENSING TOOL OR INJECTION PUMP. An air pressure regulator MUST be used with a pneumatic dispenser. Start at a low setting and gradually increase pressure as needed until the desired epoxy flow is achieved. Use a maximum of 40 psi (0.28 MPa) air pressure. Excessive pressure may result in cartridge plunger leakage.

Begin the injection process from the lowest port on a vertical surface, moving up the wall. On horizontal surfaces, begin at the widest part of the crack and move outward. Inject epoxy into the port until you either get flow from the adjacent port or until the epoxy stops flowing. Allow the injection resin to cure for at least 24 hours. Ports and capping material can be removed with a chisel and/or grinder. Note: Some cracks may take more time to inject, especially hairline cracks. Cracks may be smaller in width (or larger) than they appear from the surface.

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