



SRC Silicone Roofing System

Installation Guide Specification

For Preserving Concrete Roofs

Saving Money, Safeguarding the Environment...One Roof at a Time.®

NOTE: This Installation Guide Specification is for structural concrete roof decks ONLY. It is NOT to be used for lightweight concrete roofing systems.

I. GENERAL

1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install a spray applied elastomeric silicone coating system as outlined in this specification to create a seamless, locally-reinforced, fully-adhered waterproof membrane over concrete roof decks.
- B. The manufacturer's application instructions for each product used are considered part of these specifications and should be followed at all times.

1.02 SUBMITTALS

- A. Submit product data sheets and literature verifying fire ratings and physical properties of materials.
- B. Submit material safety data sheets.

1.03 QUALITY ASSURANCE

- A. Supplier Qualifications: The SRC Silicone Roofing System for preserving concrete roofs, as supplied by National Coatings Corporation, is approved for use on the project.
- B. Applicator Qualifications: The applicator shall be approved by National Coatings Corporation to apply the system. Manufacturer's written verification of applicator approval is required.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Containers and Packaging: Deliver materials in original sealed containers, clearly marked with: manufacturer's logo; full product name; and lot number(s).
- B. Storage: Store materials between 40°F and 100°F with careful handling to prevent damage to products. If conditions exceed these ranges, special consideration in storage must be taken. Do not store at high temperatures in direct sunlight.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction
- D. Protection: Protect all materials from freezing and other damage during transit, handling, storage, and installation.

1.05 PROJECT CONDITIONS

- A. These minimum recommendations for material usage are for ideal conditions. The number of gallons per 100 square feet may need to increase due to uneven application, rough surface texture, wind conditions while spraying or other variables.

- B. Wet insulation must be thoroughly evaluated and then addressed with removal or other measures. Consult a National Coatings Technical Consultant regarding the need for moisture surveys and other assessments. Structural cracks should be referred to the appropriate National Coatings Technical Consultant.
- C. Structural cracks should be referred to the appropriate National Coatings Technical Consultant.
- D. This installation guide specification assumes that the deck is in sound condition.
- E. Do not apply materials unless surface to receive silicone roofing system is clean, dry and prepared as specified.
- F. Install all material in strict accordance with all published safety, weather, or applicable regulations of the manufacturer and/or local, state, and/or federal agencies which have jurisdiction.
- G. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system by creating bridges are not acceptable.
- H. Do not proceed with application of coating or sealing materials when temperature is less than 35°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing.
- I. Heavy puddles of coating on the roof are not acceptable.
- J. Instructions for use of all roofing materials and application equipment should be read and followed at all times.
- K. As a general principle, to prevent the ponding of water, install additional drains as necessary or install drainage systems with sprayed polyurethane foam (SPF).

1.06 DETAIL WORK

- A. This specification does not extensively outline procedures for preparation and finishing of drains, vents, ducts, flashings, parapet walls, sheet metal work, etc. This work should be outlined by the contractor before work commences, and shall be performed observing good trade practices.

II. PRODUCTS

2.01 SRC SILICONE ROOFING SYSTEM

- A. The roofing system is the SRC Silicone Roofing System, provided by National Coatings Corporation.
- B. Physical Properties of Cured Roofing System:
 1. The roofing system shall have good resistance to ponding water.
 2. The roofing system shall contain no migrating fire retardants.
 3. The roofing system shall have a Class A fire rating on a noncombustible deck when tested according to the procedures outlined in ASTM E-108.
 4. The coating used in the roofing system shall have a VOC content of < 50 grams / liter
 5. The roofing system shall also meet the following physical property requirements:

Property	ASTM Method	Results
Tensile Strength, psi (Max @ 73°F)	D-412	Minimum 247
% Elongation @ Break (73°F)	D-412	Minimum 237
Weathering/UV Resistance:	D-6694	No degradation - 5000 hrs
Permeance, perms	E-96	10.7
Volume Solids % Weight Solids %	D-2369	92+/-3 92+/-3

- C. The reinforcing fabric shall be Tietex T272 or an equivalent that meets the following physical property requirements:

Properties	Test Method	Average Value
		T272
Weight (per sq. yard)	Calculated by formula	3 ounces
Bursting Strength (lbs)	ASTM D3786	177
Tensile Strength (psi)	ASTM D1682	57.1
Tear Strength (lbs)	ASTM D1117	16.1
Elongation (%)	ASTM D1682	62
Conformability		Excellent
Ease of Saturation		Excellent

2.02 RELATED MATERIALS

- A. Flashing, adhesives, thinners, elastomeric caulking compounds, primers, and similar materials shall be approved by the manufacturer of the coatings. All materials used shall be applied in accordance with its manufacturer's recommendations.

2.03 EQUIPMENT

- A. For recommended spray equipment guidelines, please refer to National Coatings Technical Paper "TP-117 Silicone Coatings Spray Guide", or consult the spray equipment manufacturer directly.

III. EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins and product guide specification instructions.

3.02 EXAMINATION

- A. Inspect surfaces which will receive the SRC Silicone Roofing System to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.
- B. Identify any areas that are damaged and will require repair and reinforcement.
- C. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.
- D. Verify that all critical areas around the immediate vicinity of the spray area are suitably protected.

- E. Verify all roof drains are clean and in working order.
- F. Verify that all air conditioning and air intake vents are suitably protected or closed.
- G. When properly applied, SRC silicones from National Coatings are not affected by ponding water. However, the National Roofing Contractors Association (NRCA) considers ponding water objectionable due to structural and health concerns. The NRCA recommends that all roof assemblies have positive drainage. NCC strongly recommends following established NRCA guidelines.

3.03 PREPARATION

- A. The concrete must be clean, dry and chalk free.
- B. The surface must be thoroughly cured, (at least 28 days for new concrete), before the application of coating or caulking materials. The surface pH must not be higher than 11 prior to applying the SRC Roofing System.
- C. If curing compounds or bond breakers have been used on the concrete, their compatibility with the SRC Roofing System or other products for good adhesion must be verified by their manufacturer. If this verification is not obtainable, acid etch or sandblast to remove these compounds or bond breakers.
- D. Any alkaline seepage (efflorescence), must be removed by acid washing followed by a clean water rinse.
- E. On old or new concrete, remove any grease, dirt, oil, loose concrete, excessive chalk or powder, and any other contaminating materials. Industrial Cleaner, scraping, vacuuming, waterblasting, sandblasting or acid washing may be required to achieve a clean, sound surface.
- F. Adhesion testing should be completed as per NCC technical bulletin.
- G. The roof shall be primed with **SRP Concrete primer**, 2 Part water based epoxy primer at the rate of 1 gallon per 150-200 square feet.
- H. Patch holes and voids with **Flashing Grade Silicone Sealant**.
- I. At parapets, firewalls, expansion joint curbs, mechanical curbs or skylights **Flashing Grade Silicone Sealant** and **T272** in a three course detail to overlay all flashing located less than 5 inches above the deck. Flashing extending above 5 inches shall be flashed in using **Flashing Grade Silicone Sealant** only.
- J. Other areas such as pipe jacks, pitch pockets, prefab curbs, and other roof tie ins shall also be flashed with **Flashing Grade Silicone Sealant** and **T272**.
- K. Allow coating to dry thoroughly (normally 8 to 24 hours depending on weather conditions), before proceeding to application of the remainder of the roofing system as described in section 3.04 of this guide specification.

3.04 APPLICATION

- A. After thorough preparation as necessary, the entire roof shall receive the SRC Silicone Roofing System consisting of silicone coating in one or two passes over entire roof surface to achieve a final thickness of:
 - 30 mils (2.0 gallons per square) minimum for a 10 year warranty
 - 38 mils (2.5 gallons per square) minimum for a 15 year warranty

45 mils (3.0 gallons per square) minimum for a 20 year warranty

- B. While spraying the silicone coating, special effort should be made to have pass lines overlap on membrane seams as to provide additional coating thickness on the seams.
- C. All coating edges shall be cut evenly in a uniform manner so as to provide an aesthetically pleasing appearance.

3.05 FIELD QUALITY REQUIREMENTS

- A. In case of manufacturer's labor and material warranty - Manufacturer's Field Services: Inspection by the coating manufacturer's representative shall be made to verify the proper installation of the system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the contractor's expense. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.

3.06 CLEANING

- A. Surfaces not intended to receive the SRC Silicone Roofing System shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site. Mineral Spirits can be used to remove coating from unintended surfaces.

IV. MATERIALS

The following materials listed in these recommendations are available from National Coatings Corporation:

1. SRC 740 or SRC 750 high solids silicone roof coating
2. SRP Primer for use over concrete substrates
3. Flashing Grade Silicone Sealant
4. T272 polyester reinforcing fabric, 6-inch, 10-inch, 20-inch and 40-inch

The suggestions and data in this specification are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. The prospective user should determine the suitability of our materials and installation recommendations before adopting them for commercial use.



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