

## Installation Guide Specification For Recoating SPF Roofs

### I. GENERAL

#### 1.01 SUMMARY

- A. Provide labor, materials, equipment, and supervision necessary to install spray-applied elastomeric acrylic coating system as outlined in this specification to create seamless weatherproofing over existing Sprayed Polyurethane Foam (SPF) and coating roofing.
- B. The manufacturer's application instructions for each product used are to be 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 ENDURATECH Premier Roofing System for recoating SPF roofs, as supplied by NCFI Polyurethanes, is approved for use on the project.
- B. **Applicator Qualifications:** The applicator shall be approved by NCFI Polyurethanes to apply the system. Manufacturer's written verification of Tier One 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. **Protection:** Protect all materials from freezing and other damage during transit, handling, storage, and installation.

#### 1.05 PROJECT CONDITIONS

- A. These recommendations are for maintenance of an existing coating system and not intended for correction of badly deteriorated roofing systems that may need replacement.
- B. These recommendations assume that the foam system is sound, well adhered, dry, and not leaking in any areas.

- D. 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 and/or other variables.
- E. Wet insulation must be thoroughly evaluated and then addressed with removal or other measures. Consult a NCFI Polyurethanes Technical Consultant regarding the need for moisture surveys and other assessments.
- F. Structural cracks should be referred to the appropriate NCFI Polyurethanes Technical Consultant.
- G. This installation guide specification assumes that the deck, if wood, is in sound condition.
- H. Do not apply materials unless surface to receive acrylic roofing system is clean, dry and prepared as specified.
- I. 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.
- J. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system thereby creating bridges are not acceptable.
- K. Do not proceed with application of coating or sealing materials when temperature is less than 45°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing.
- L. Heavy puddles of coating on the roof are not acceptable.
- M. Instructions for use of all roofing materials and application equipment should be read and followed at all times.
- N. 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, etc. This work should be outlined by the contractor before work commences, and shall be performed observing normal trade practices. In most cases, the self-flashing attributes of the foam will be utilized without the need for additional flashing materials. In any case, the foam should never be applied in a manner that traps moisture or forces moisture to migrate underneath the system.

## II. PRODUCTS

### 2.01 SPRAY APPLIED ELASTOMERIC ACRYLIC COATING SYSTEM

- A. The roofing system is a 100% acrylic, elastomeric, spray-applied ENDURATECH Coating System manufactured by NCFI Polyurethanes.
- B. Physical Properties of Cured Roofing System: The testing of the coating shall be done under ASTM-D6083, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing", unless otherwise specified.

1. The roofing system shall have good resistance to ponding water.
2. The roofing system shall contain no plasticizers.
3. The roofing system shall contain no migrating fire retardants.
4. 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.
5. The roofing system shall also meet the following physical property requirements:

Property	ASTM Method	Results
Tensile Strength, psi (Max @ 73°F)	D6083	Minimum 250
% Elongation @ Break (73°F)	D6083	Minimum 250
Wet adhesion to Specified Substrate	D6083	Minimum 3.0 pli
Permeance, perms	D6083	Maximum 20
Volume Solids % Weight Solids %	D6083	> 50 > 65

#### 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 NCFI Polyurethanes Technical Service Department.

### 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 that will receive the ENDURATECH Premier Roof System to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.
- B. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.
- C. Verify that all critical areas around the immediate vicinity of the spray area are suitably protected.
- D. Verify all roof drains are clean and in working order.
- E. Verify that all air conditioning and air intake vents are suitably protected or closed.

### 3.03 PREPARATION

- A. All surfaces to be coated must be clean, sound, dry, and free of any dirt, grease, oil, debris or other contaminants that would interfere with proper adhesion. Pay particular attention to the low areas on the roof, where more contaminants may have settled. Loose coating should be removed prior to application of coating. Any wet areas must be removed and/or dried out prior to application of coating.
- B. Exposed SPF areas that are small must be brushed with a stiff bristle broom to remove the degraded SPF prior to caulking with ENDURATECH S.
- C. Caulk or fill all cracks, holes, or other surface imperfections with a high quality elastomeric caulk or sealant designed for roofing applications, such as ENDURATECH S. All caulk or sealant must be thoroughly dry before application of coating. **NOTE: Silicone sealants are not compatible with acrylic coatings.**
- D. Start repair of large damaged and deteriorated areas by removing existing coating and SPF down to dry, good quality SPF. This requires close observation to insure that the removal operation is extended both horizontally and vertically to the point where all wet, contaminated, and deteriorated SPF has been removed. The damaged SPF must be removed by mechanical scarifying equipment to a minimum depth of ½" or until good SPF is determined, whichever is greater. Removal of SPF by hand is not acceptable. These areas shall receive an extra two coats of ENDURATECH before coating the entire roof. Large or deep areas of foam removal may require the application of additional foam prior to coating. Apply a minimum of ½" new SPF. Do not remove an area larger than can be refoamed and base coated in the same day.

### 3.04 APPLICATION

- A. Any areas of bare foam should receive two coats of ENDURATECH prior to coating the entire roof.
- B. After thorough preparation of the existing surface, the entire roof shall receive two separate coats of ENDURATECH.
- C. The first coat of ENDURATECH should be evenly applied at the rate of 1½ gallons per 100 square feet by spray or roller. If spraying, backroll the first coat. Apply enough pressure on the roller to work the coating into all the rough areas of foam.
- D. Allow the first coat to dry thoroughly, approximately 4 to 12 hours, prior to the application of the second coat.
- E. The second coat of ENDURATECH should be evenly applied at the rate of 1½ gallons per 100 square feet by spray or roller.
- F. Heavy puddles of coating should not be left on the roof. All coating should be distributed evenly at the specified rates of coverage.
- G. The recommended rate of coverage assumes that at least 10 mils of coating already exist on the roof. If less than 10 mils exist, another coat of ENDURATECH should be applied at the rate of 1½ gallons per 100 square feet.
- H. CLEAN-UP: ENDURATECH is water based for ease of application and clean-up. Cleaning of hands and tools should be done immediately following application, using warm or hot soapy water.

### 3.05 FIELD QUALITY REQUIREMENTS

- A. Manufacturer's Field Services for NCFI Polyurethanes warranted projects: Inspection by NCFI Polyurethanes' 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 foam insulation and/or elastomeric coating materials 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.

## IV. MATERIALS

The following materials listed in these recommendations are available from NCFI Polyurethanes:

1. ENDURATECH, 100% acrylic, high performance elastomeric roof coating.
2. ENDURATECH S, 100% acrylic, architectural sealant; available as trowelable grade or brushable grade.