

Greencoat Single-Ply Acrylic Roof Restoration System

TECHNICAL SPECIFICATION

PART 1 GENERAL REQUIREMENTS

1.01. SCOPE

- A. Provide labor, materials, equipment, and supervision necessary to install elastomeric acrylic coating of the system as outlined in this specification for the complete roof restoration.
- B. Successful application is dependent upon the experience, integrity, ability, technology, and common sense of the designer and applicator/contractor.
- C. The manufacturer's application instruction for each product utilized is to be considered part of these specifications and should be followed at all times.

1.02. QUALITY ASSURANCE

- A. Supplier Qualifications: The Greencoat Restoration System, as supplied by UltraTite Solutions, LLC (UltraTite), is approved for use on the project.
- B. Applicator Qualifications: The applicator shall be approved by UltraTite to apply the system. The manufacturer's written verification of applicator approval is required.
- C. In the absence of a general contractor, the roofing contractor shall be the prime contractor. All subcontractors shall be identified and approved at the time the proposal is submitted. The contractor shall carry a valid state roofing license.
- D. Field Quality Control: Before commencing installation of the Acrylic Restoration System, an Adhesion Pull Test must be installed and pass the minimum pull value of 2.0 pli. During the installation of the Acrylic Restoration System, an authorized UltraTite field inspector shall visit the job site as needed to review the installation with the Roofing Contractor. Upon completion of the Greencoat Restoration System installation, an inspection by UltraTite or UltraTite's designated third-party inspection firm may be required. Consult with UltraTite for details and warranty requirements.
- E. Moisture Survey: A roof membrane that has insulation beneath the membrane shall have an infrared moisture survey conducted, as needed, before installation begins to identify any wet areas (> 18% moisture) beneath the membrane.

1.03. SUBMITTALS

- A. The bidders shall submit verification that they are an approved UltraTite contractor.
- B. A copy of the manufacturer's technical data bulletins for specified foam and coating materials shall be submitted.

1.04. PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Products shall be delivered in the manufacturer’s original, unopened containers, clearly labeled with the manufacturer’s name, product identification, safety information, and lot numbers.
- B. Containers shall be stored out of the weather and out of direct sunlight at temperatures specified by the manufacturer.
- C. Protect all products from freezing and other damage during transit, handling, storage, and installation.

1.05. PROJECT CONDITIONS

- A. The coating manufacturer shall be consulted for recommendations on the proper system to use on the project substrate and at the expected substrate and ambient temperatures. Under no condition shall the coating be applied when the substrate temperature is expected to be below 40°F or is expected to reach freezing before the material is completely cured. Do not apply coatings when wind velocity is above 15 mph.
- B. Do not apply materials unless the surface to receive 100% acrylic coating is clean and dry.
- C. If any area under the roof substrate is saturated, it must be removed and replaced with like materials before application.
- D. The entire system shall fully adhere to the surface on which it is applied. Voids left under the system caused by bridging are not acceptable.
- E. Install all material in strict accordance with all published safety, weather, or applicable regulations of the manufacturer and/or federal agencies that have jurisdiction.

1.06. DETAIL WORK

- A. Refer to Greencoat Detail Drawings for preparation and finishing of drains, vents, ducts, flashings, parapet walls, etc. The contractor should outline this work before work commences and shall be performed by observing good trade practices. Any details not shown in the drawings need to be approved by UltraTite before application.

PART 2 PRODUCTS

2.01. ELASTOMERIC, ACRYLIC COATING SYSTEM

- A. The coating shall be the Greencoat or HT elastomeric acrylic coating system, manufactured by UltraTite.
- B. Physical Properties of Cured Coating System:

PROPERTY	ASTM METHOD	RESULTS	Greencoat	Greencoat HT
Permeability	D624	>10	14 ± 3	14 ± 3
Tensile Strength, psi (Max @ 73°F)	D6083/ D-412	Minimum 200	>200	>500
% Elongation @ Break (73°F)	D6083/ D-412	Minimum 100	>100%	>600

Wet Adhesion to Specified Substrate	D6083	Minimum 2.0 ply	>2.0	>2
Permeance, perms	D6083	Maximum 60	< 60	<60
Volume Solids %	D6083	> 50	55.0	55
Weight Solids %	D6083	> 60	65.0	65
Hardness Shore A	D2240	>50	50 – 55	50 – 55

- **Coverage (mils/100 SF/gal):** 8.8 Dry Mils
- **Drying Time at 24 wet mils:**
 Dry to Touch - 4 hours
 Dry-Through - 12 hours
 Dry-to-Recoat - >6 hours
- **Total Cure Time (approx.):** 30 days
- **Adhesion/peel test on foam:** 2.4 lbs/in.
- **Service Temperature Range:** 50° to 200°F
- **Roof Deck Classification:** UL 790 (ASTM E-108)
- **Maintenance and Repair:** Class A
- Meets ASTM D6083 - Standard Specification for Liquid Applied Acrylic Coating Used in Roofing
- ENERGY STAR® Certified
- Meets the requirements of California Energy Commission (CEC) Title 24 Section 118(i)3 Cool Roof Rating Council (CRRC) Rated
- FM Certified
- UL Certified as a component within Class “A” and “B” fire-rated roof coverings

2.02. ACCESSORIES AND MISCELLANEOUS MATERIALS

- A. Flashing and waterproof coverings for expansion joints shall be compatible with the UltraTite acrylic coatings.
- B. GreenCoat FG shall be used to seal fatigued flashings, such as curbs, through roof penetrations, drains, base flashings, and other areas of concern.
- C. UltraTite GreenClean Cleaner Concentrate shall be used to enhance the adhesion of the acrylic coating to the existing single-ply membrane.
- D. Repairs can be made to the roof surface utilizing roofing fabric and UltraTite GreenCoat FG.
- E. Miscellaneous materials such as adhesives, elastomeric caulking compounds, metal, vents, and drains shall be a composite part of the roof system and shall be compatible with UltraTite coating materials.

PART 3 EXECUTION

3.01. MANUFACTURER’S INSTRUCTIONS

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

3.02. EXAMINATION

- A. Inspect surfaces, which will receive the coating 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 that 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. SURFACE PREPARATION

A. GENERAL

- 1. Existing roofing materials shall be securely fastened using appropriate fasteners and plates to meet local wind uplift requirements.
- 2. All roofing surfaces shall be free of loose material, grease, soft asphalt, and other materials that could interfere with adhesion. Typically, this can be achieved by power washing with a minimum of 3500 psi power washer. Severe contamination may require industrial cleaning products. **Check with your UltraTite Representative for recommendations.**
- 3. If any area under the membrane is saturated, it must be removed and replaced with like materials before application.
- 4. Areas of ponded water must be repaired with the application of SPF or GreenLevel or the installation of additional drains.
- 5. Based on the results of the moisture survey, remove any wet insulation and replace it with like type and kind of insulation.

B. TPO, PVC & HYPALON

- 1. TPO, PVC, and Hypalon membrane roofs should be repaired and made watertight according to the manufacturer's recommended procedures.
- 2. Apply GreenPrime SP to TPO, PVC, & Hypalon membranes at a rate of ½ - 1 gallon per 100 sq ft (8-16 wet mils / 3-7 dry mils) depending on the type of membrane.
- 3. The entire restoration system shall be fully adhered to the surface on which it is applied. Voids left under the system caused by bridging are not acceptable.

5. All sealants should be applied to achieve 50 dry mils.
 - a. The solids content of the product will determine the amount of wet mils needed to achieve 50 dry mils.
6. Seal around all edges, seams, mechanical equipment and roof penetrations with GreenCoat FG and fabric as needed.
7. Any exposed scrim should receive a three-course application of acrylic coating and fabric as detailed below.
 - a. Apply acrylic base coat over the area at a rate of 1.5 gallons per 100 square feet (24 wet mils / 13 dry mils).
 - b. In the wet coating, embed the polyester fabric. The fabric must be completely embedded in the acrylic base coat.
 - c. Immediately apply a layer of acrylic base coat at a rate of 1 gallon per 100 square feet (16 wet mils / 8 dry mils).
 - d. Allow to dry for 12 to 24 hours.
8. Any seam that is failing or appears near failure should receive a three-course application of acrylic as detailed below.
 - a. Apply acrylic base coat in a 6-inch-wide strip over the seam at a rate of 1.5 gallons per 100 square feet (24 wet mils / 13 dry mils).
 - b. In the wet coating, embed the 4-inch-wide polyester fabric. The fabric must be completely embedded in the acrylic base coat.
 - c. Immediately apply a 6-inch-wide layer of acrylic base coat at a rate of 1 gallon per 100 square feet (16 wet mils / 8 dry mils).
 - d. Allow to dry for 12 to 24 hours.
9. All areas of significant ponding, valley areas, drain areas, walkways, and high-traffic areas should receive fabric as follows:
 - a. Apply acrylic base coat in a 45-inch wide strip at a rate of 1.5 gallons per 100 square feet (24 wet mils / 13 dry mils).
 - b. In the wet coating, embed the 40-inch wide polyester reinforcing fabric. To ensure a completely smooth surface, use a light broom to saturate the fabric and work out all fabric wrinkles and fish mouths.
 - c. Immediately spray or roll a second coat of acrylic base coat to the surface of the fabric at a rate of 1 gallon per 100 square feet (16 wet mils / 8 dry mils).

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- d. Large areas may require multiple widths of fabric. In these areas, the fabric should be overlapped at least 4 inches.
- e. Coating and fabric should always extend at least six inches above the maximum potential waterline.
- f. Allow to dry for at least 12 to 24 hours, preferably 72 hours.

3.04. APPLICATION

A. Elastomeric Acrylic Coating System:

PRODUCT	WARRANTY	APPLICATION RATE	COATS
Greencoat or HT*	5 Year	3.5 Gallons/sq. (56 wmt/28 dmt)	2
Greencoat or HT*	10 Year	4 Gallons/sq. (64 wmt / 32 dmt)	2
Greencoat or HT*	15 Year	5 Gallons/sq. (80 wmt / 40 dmt)	3
Greencoat or HT*	20 Year	6 Gallons/sq. (96 wmt / 48 dmt)	4

*All systems with a warranty longer than 10 years require Greencoat HT as a top coat.

- 1. Material shall be applied to the entire roof according to the application chart:
- 2. 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, roof profile, wind conditions while spraying, or other variables.
- 3. No coating shall be applied if the weather will not allow it to dry prior to exposure to precipitation or freezing temperatures.
- 4. Allow to thoroughly dry before exposing to foot traffic.

3.05. FIELD QUALITY REQUIREMENTS

A. Inspection by the coating manufacturer’s representative shall be made, as needed, 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.

3.06. CLEANING

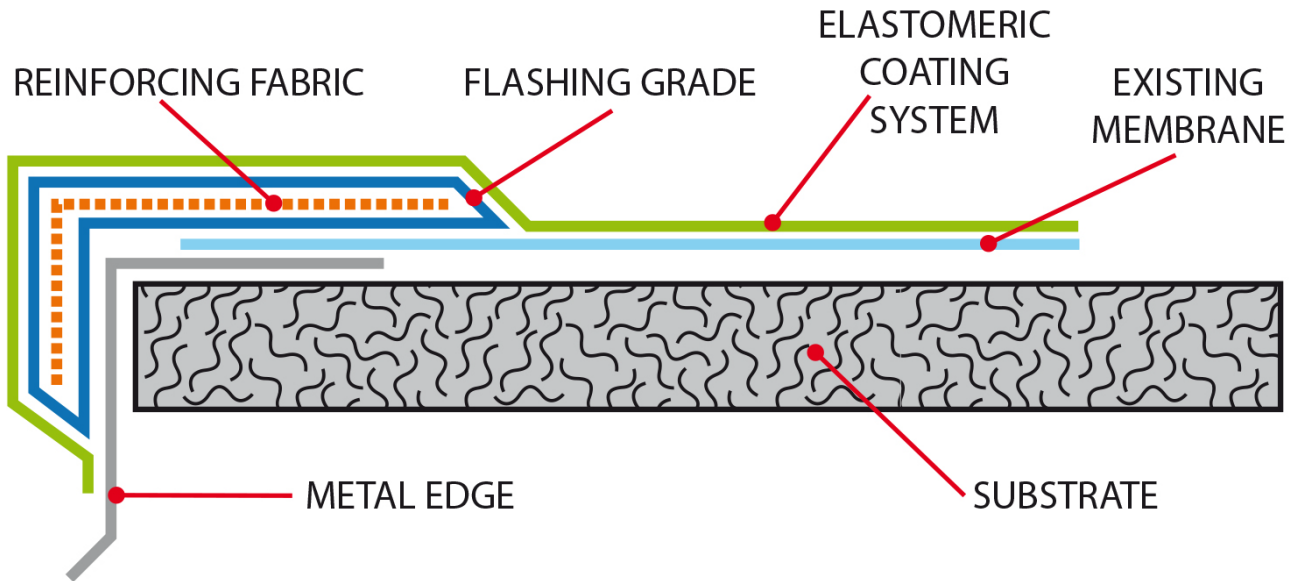
- A. Surfaces not intended to receive spray polyurethane foam insulation and/or elastomeric coating materials shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing, or replacing.
- B. All debris from the completion of work shall be completely removed from the project site. The site shall be left in a broom-clean condition.

3.07. MATERIAL

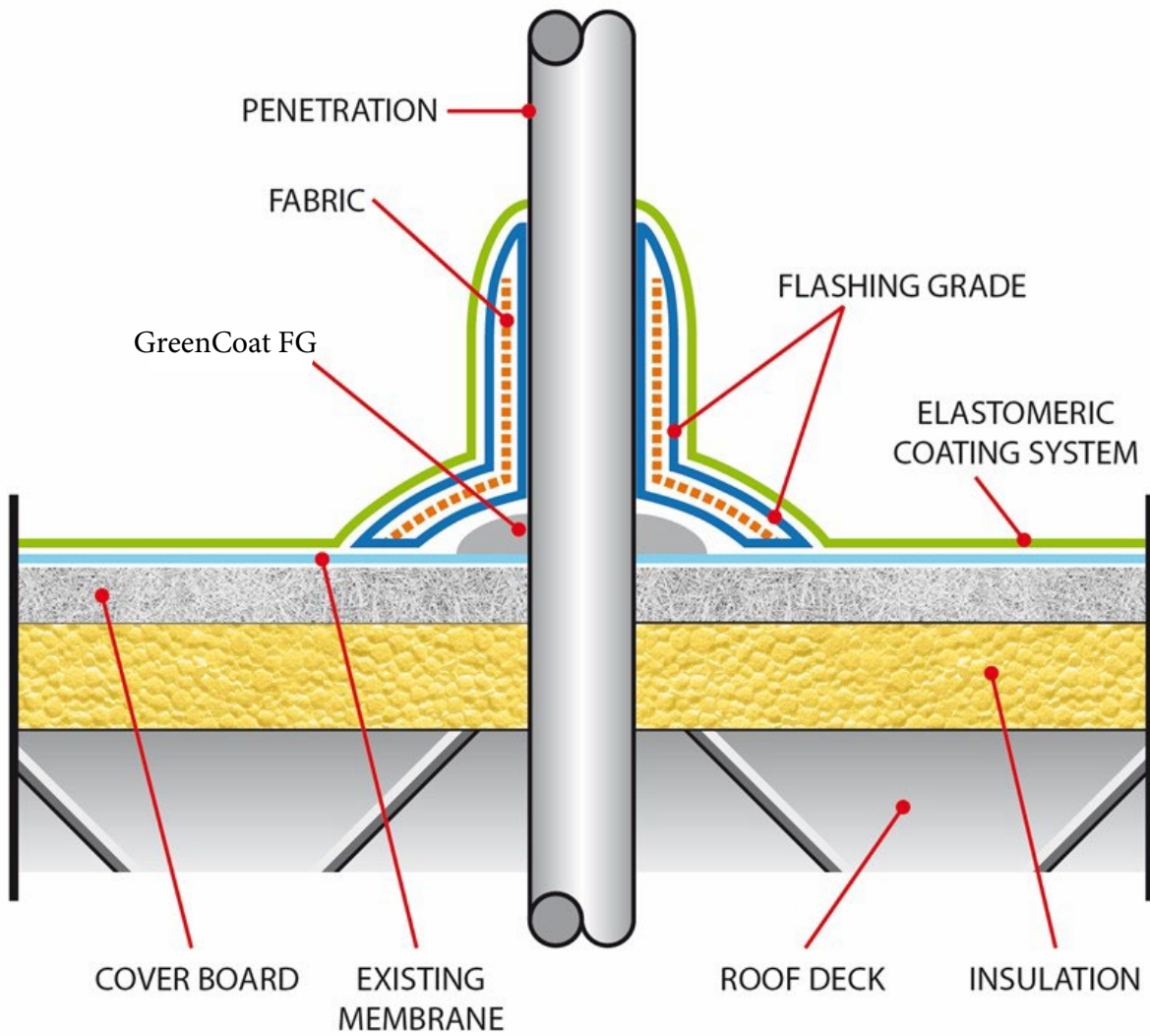
- A. The following materials are available from UltraTite:
1. Greencoat Series – 100% acrylic, elastomeric roof coating
 2. Greencoat HT Series – 100% acrylic, High Tensile elastomeric roof coating
 3. GreenClean Cleaner Concentrate
 4. GreenKnit – Polyester Fabric
 5. GreenClean – Wash Primer
 6. GreenPrime SP – Single-Ply Primer
 7. GreenFiber – Fibers
 8. GreenLevel – 2 Component Roof Leveling Compound

3.08. Detail Drawings

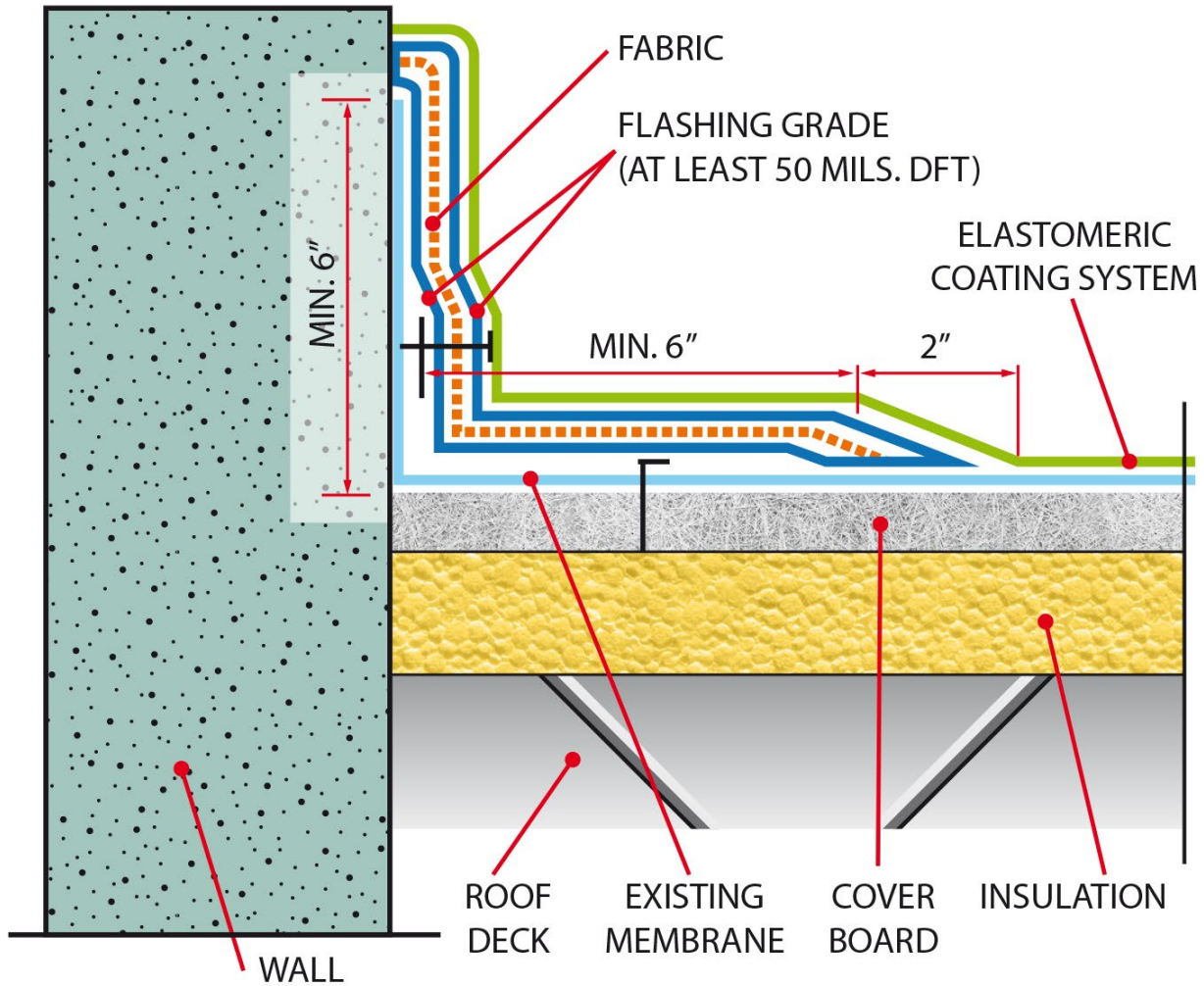
3-COURSE METAL EDGE



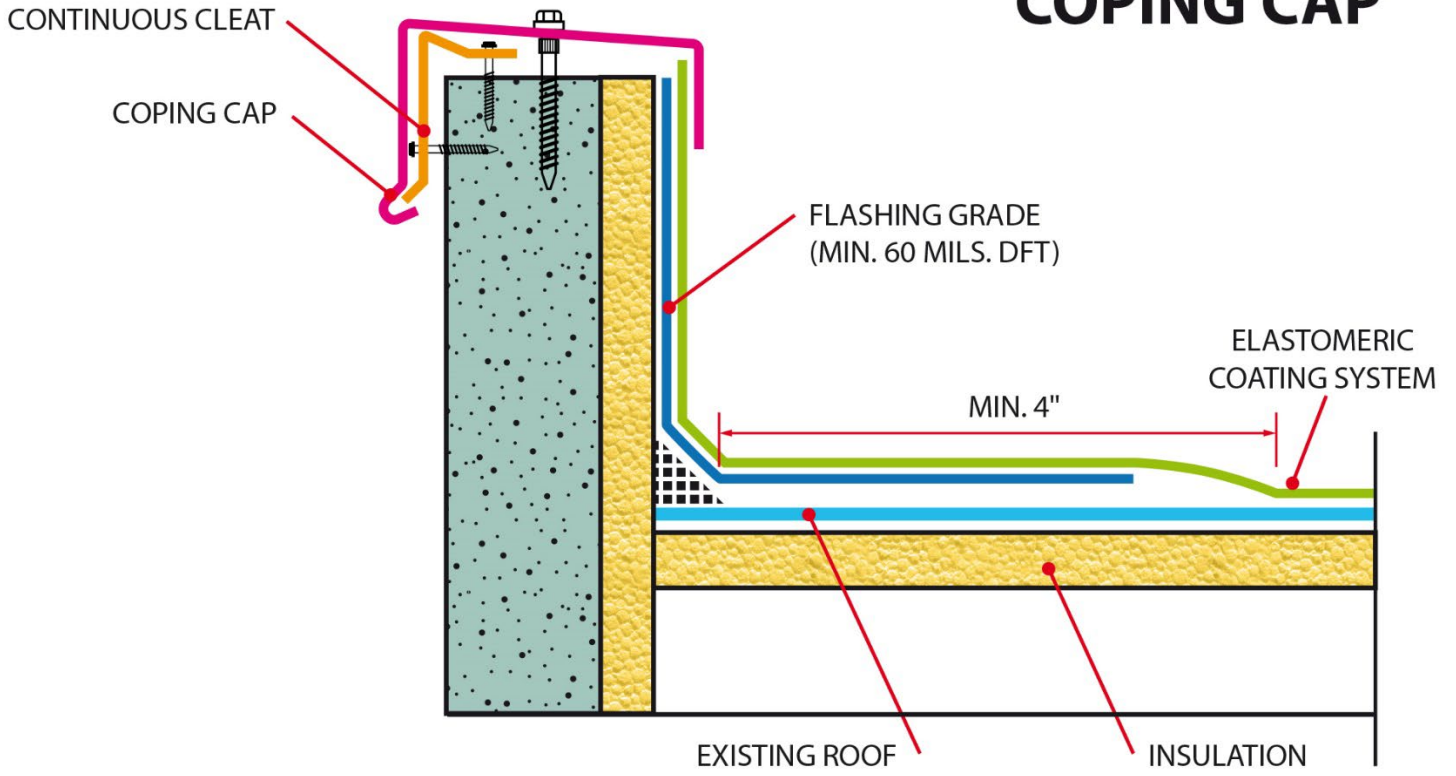
3-COURSE PIPE FLASHING

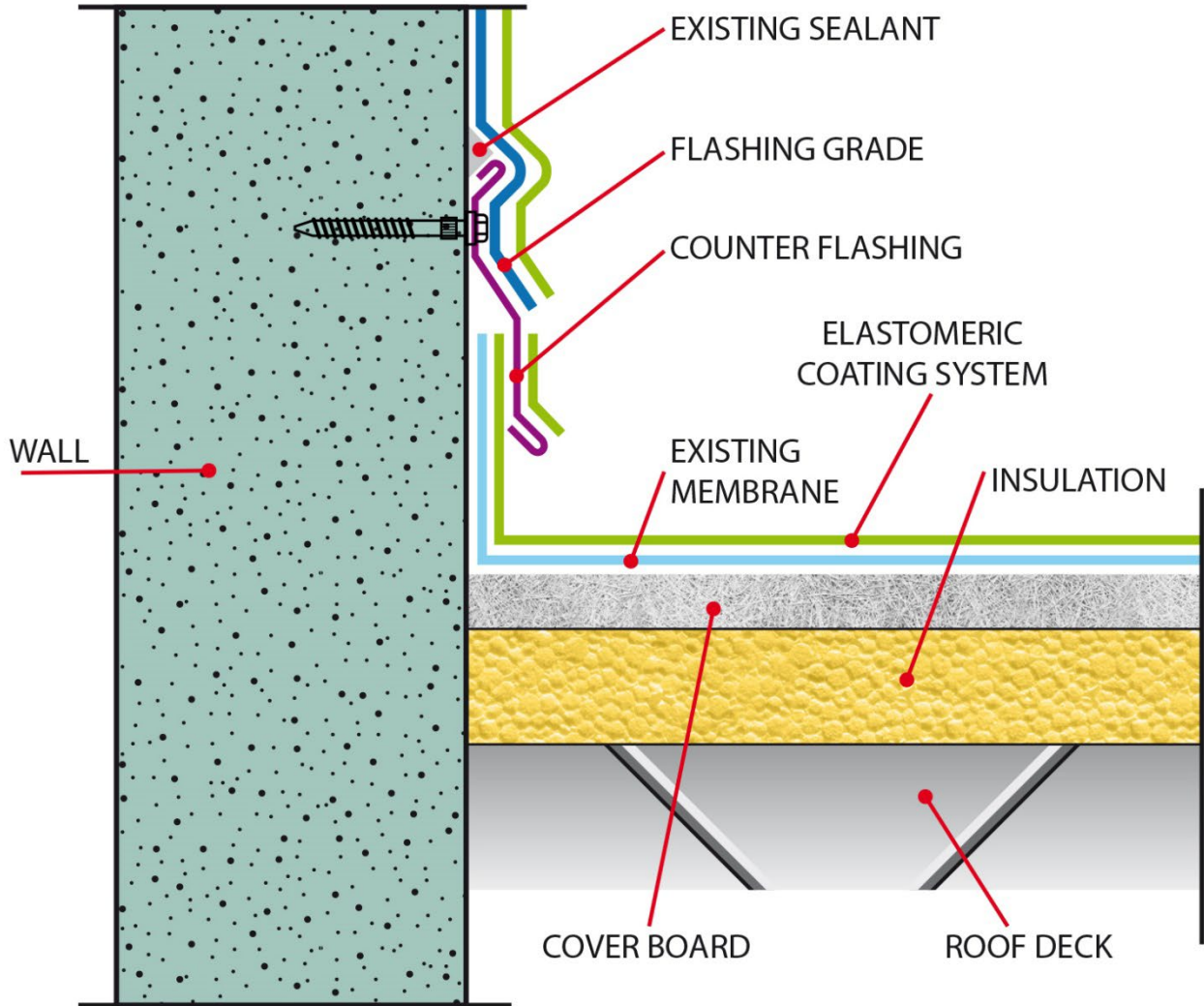


3-COURSE ROOF-TO-WALL DETAIL

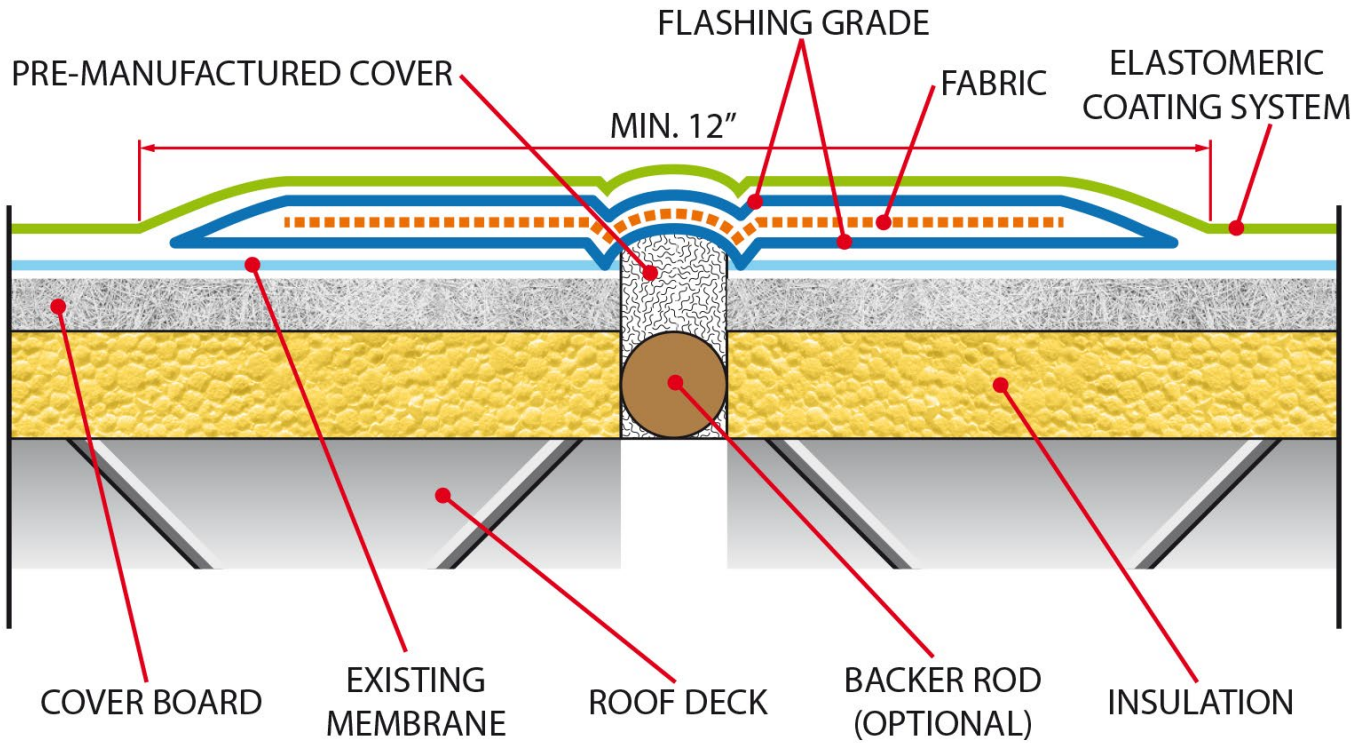


COPING CAP



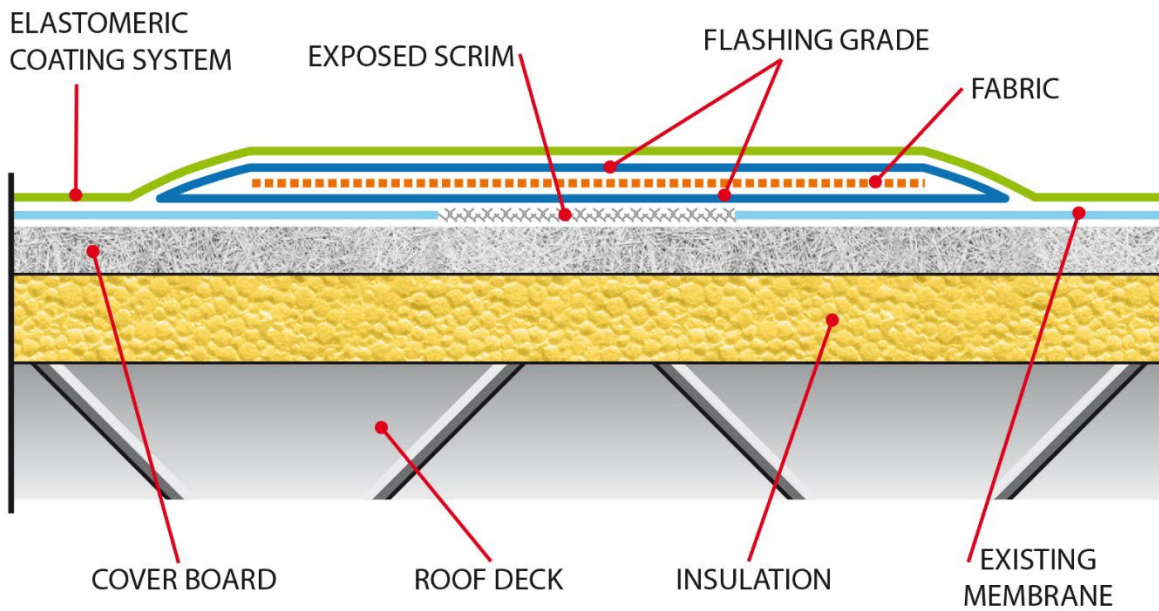


COUNTER FLASHING

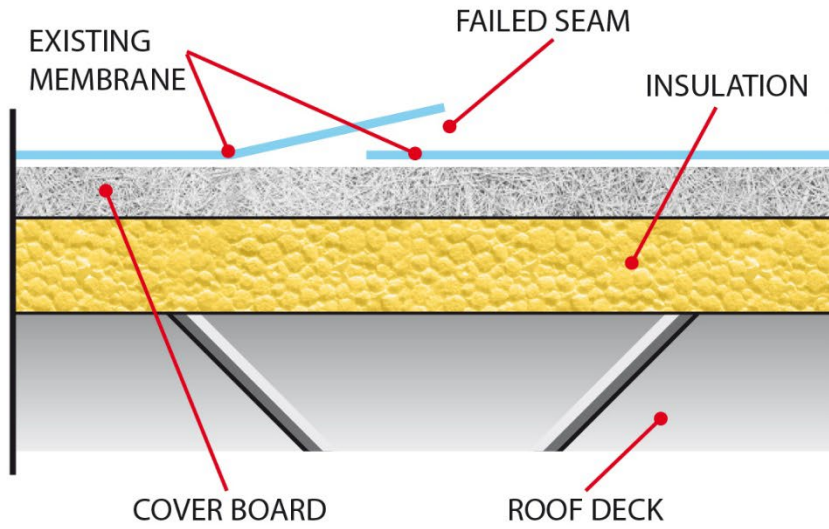


EXPANSION JOINT

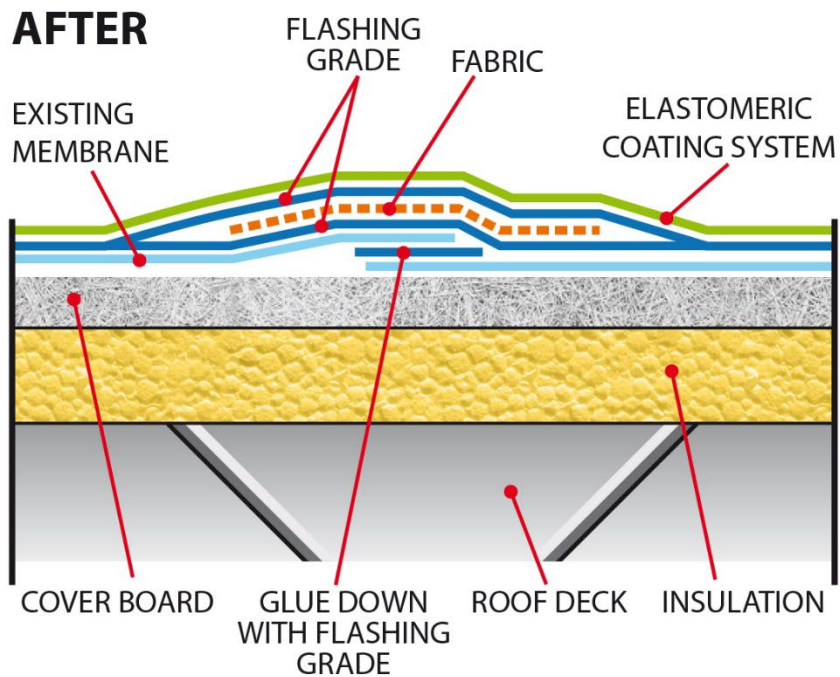
EXPOSED SCRIM IN SINGLE-PLY MEMBRANE

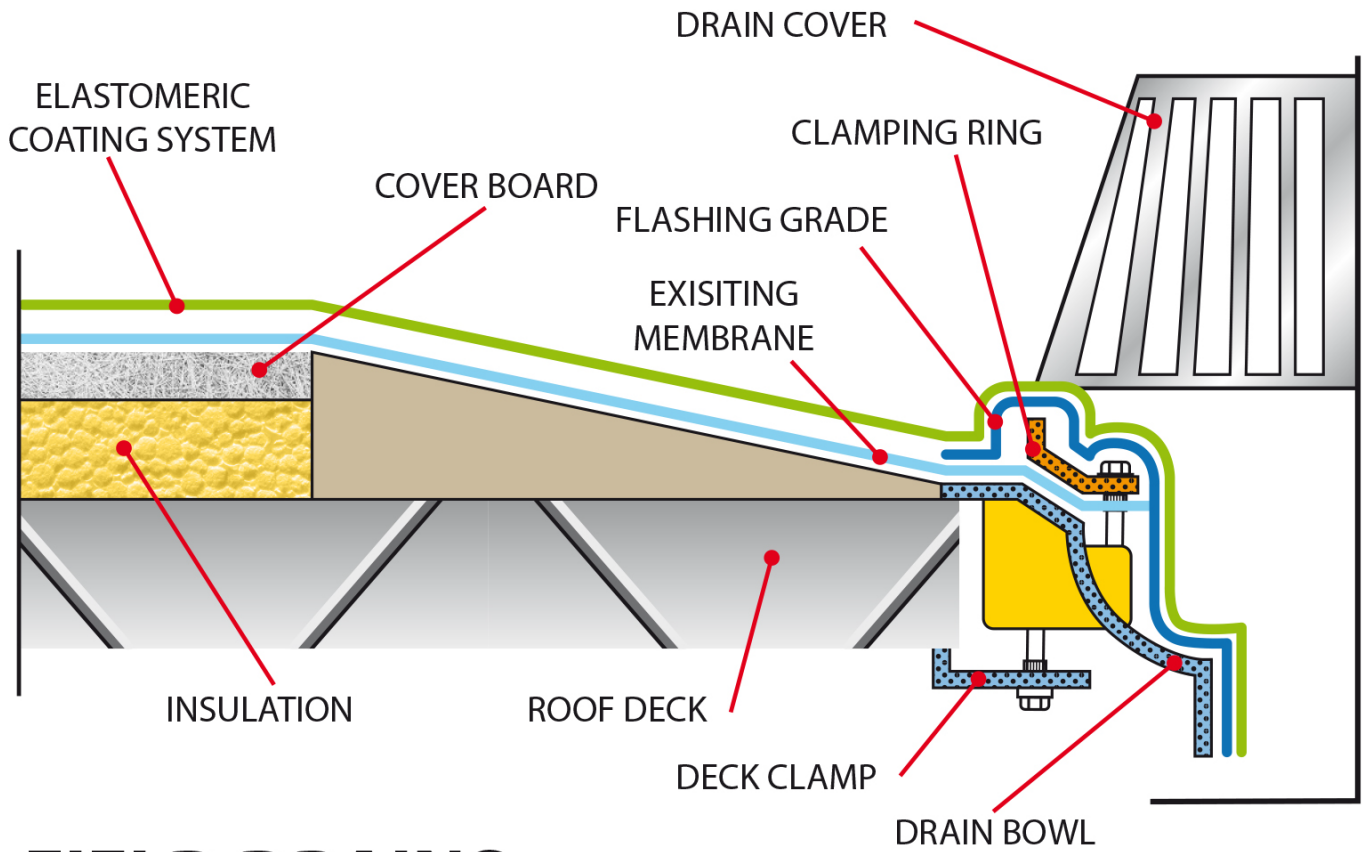


BEFORE



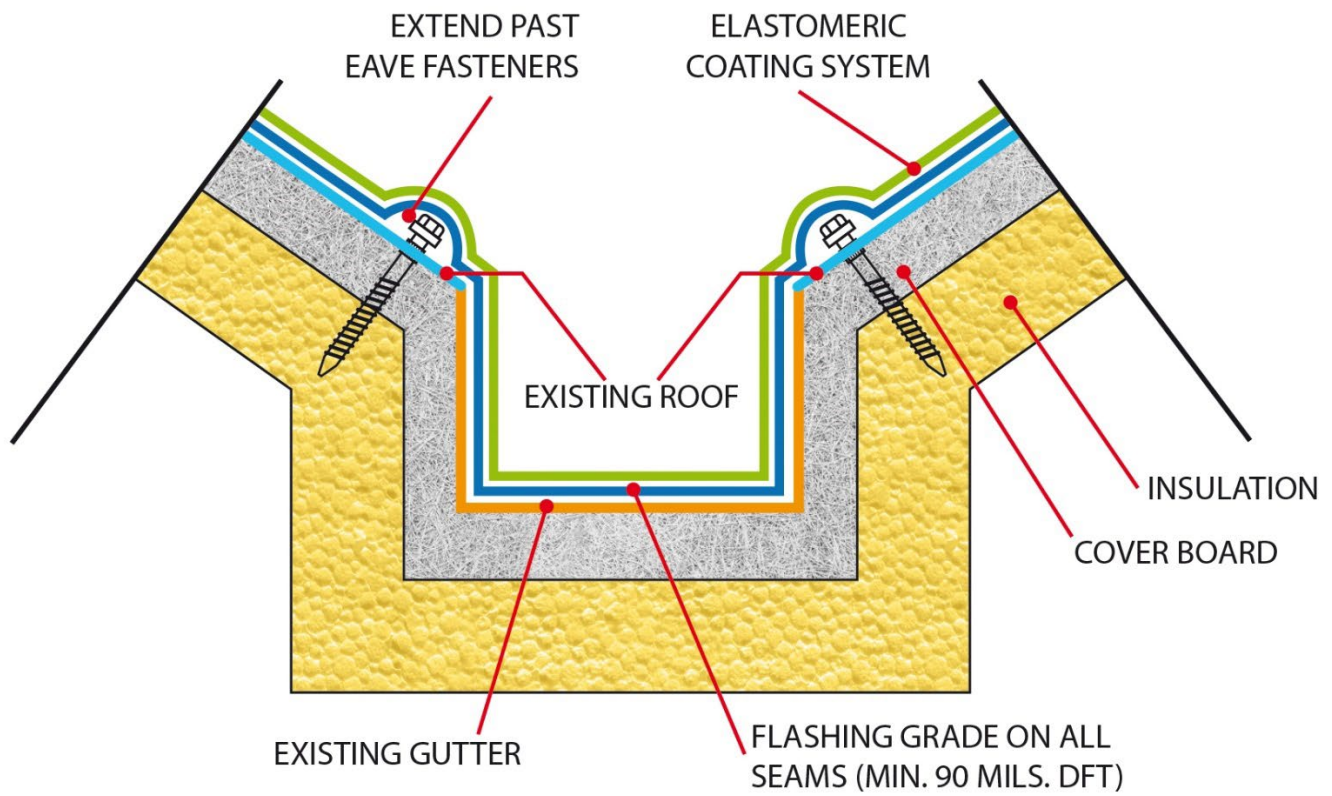
FAILED SEAM REPAIR





FIELD DRAINS

MEMBRANE ROOF GUTTER (INTERNAL)



PITCH POCKET

