

FOR AGED EPDM, SINGLE-PLY MEMBRANE ROOFS

PART 1: GENERAL

1.01 Description of Work

- A. This specification is for the application of Roof Guardian Technologies (RGT) products and should be used only as a general guide.
- B. The coating system is designed to restore and protect aged EPDM and Single-ply membrane roofs, including Aged Thermoplastic, PVC, Hypalon, TPO and CPA from further degradation and extend the useful life of the roof.
- C. Additional details and specific areas of repair are to be selected, modified or added, as necessary.

1.02 Quality Assurance

- A. *Manufacturer Qualifications:* Manufactured product shall have been commercially available a minimum of ten years.
- B. *Requirements of Regulatory Agencies:* Furnish and apply all roofing materials in accordance with all regulatory agencies and approved building codes.
- C. *Contractor Qualifications:*
 - 1. Contractor shall have business stability and own proper equipment to prepare and apply materials as described herein.
 - 2. Contractor must provide proof of insurance including liability and workers compensation certificates.
 - 3. Contractor must be an approved applicator of RGT.

1.03 Conformance Standards

- A. Underwriters Laboratory (UL), Class A
- B. Factory Mutual (FM) Approval Guide

1.04 Submittals

- A. *Product Data:* Technical product data, literature and drawings will be submitted.

1.05 Product Storage And Handling

- A. Deliver materials in manufacturer's original unopened containers bearing manufacturer's original label.
- B. Store and handle products in a manner ensuring no possibility of contamination.
- C. Store Materials at a minimum of 50°F prior to use.

1.06 Job Condition

- A. Environmental Requirements
 - 1. Do not begin work if rain is expected within 24 hours of application. Do not apply if weather does not permit complete cure prior to rain, fog, or temperatures falling below 50°F.
 - 2. All surfaces to be coated must not pond water. Water that evaporates within 48 hours is not considered ponding.
 - 3. All surfaces shall be clean, dry and structurally sound.

1.07 Protection And Coordination

- A. Owner will occupy the premises during the entire period of the roof retrofit. Cooperate with Owner during the construction operations to facilitate continued use of the facility.
- B. Coordinate scheduling with the Owner in order to relocate or protect vehicles, building occupants and building contents from damage during the construction operations.

1.08 Warranty

- A. Five (5) and Ten (10) year warranties are available. Contact Roof Guardian Technologies for more information.

PART 2: PRODUCTS

2.01 General

- A. All coatings system materials must be products of Roof Guardian Technologies, Inc.
 - 1. RG-170 Elastomeric is a 100% acrylic polymer elastomeric coating OR
 - 2. RG-180 Fibered Elastomeric coating
 - 3. RG-400 Bonding Primer
- B. Repair Options
 - 1. UT-40 Universal Tape®, a polyester fabric backed, synthetic butyl rubber adhesive tape
 - 2. RG-110 Flashing Compound is fibered reinforced acrylic cement
 - 3. RG-500 Bond-It Wash Primer is a single-component, water based wash primer

2.02 Roof Coating System

- A. Approved Manufacturer
- B. Approved Coating: RG-170 Elastomeric Roof Coating.
 - Vehicle Base100% Acrylic Resin
 - Tensile Strength@ 77°F (25°C) 170 p.s.i.
 - Elongation300% @ 75°F (24°C)
 -165% @ 0°F (-18°C)
 - Solids by wt.....67 ± 2%
 - Solids by vol.....52 ± 2%
 - Permeability(ASTM E-96) 5 perms
 - VOC< 50 g/l
- C. Approved Coating: RG-180 Fibered Elastomeric Roof Coating
 - Vehicle Base.....100% Acrylic Resin
 - Weight per gallon (approx.).....11.7 lbs.
 - Solids by weight (ASTM 1644) 67.8%
 - Solids by volume..... 52 ± 2%
 - Recycled content.....28.5%
 - Elongation/Tensile @ 73°F ASTM D 2370
 - Initial Elongation.....187%
 - Initial tensile Strength288psi
 - 1000 Hrs. Accelerated Weathering
 - Elongation.....112%
 - Permeance ASTM D 1653 A..... 18.4 perms
 - Dry Time Sets to touch.....1 hour
 - Between Coats.....24 hrs minimum
 - VOC< 50 g/l
 - Reflectivity86%
 - Therm. Emit.89%
- D. Approved Coating: RG-400 Bonding Primer
 - Vehicle Base..... thermoplastic polymer
 - Weight per Gallon..... 7.0 lbs.
 - Solids by Weight..... 38 %
 - Viscosity at 77°F (25°C).....1,100 cps
 - Elongation @ 15 dry mils.....375% at 77°F (24°C)
 - Tensile Strength @ 15 dry mils.....150 psi at 77°F (25°C)
 - Dry Time @ 1gal/100 sqft.....1 - 2 hours
 - VOC0 lb/gal (0 g/l)
 - Clean Up.....Mineral spirits/xylene

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PART 3: EXECUTION

3.01 Inspection

- A. The roof surface must be clean, dry, free of ponding water, and structurally sound.
- B. Any discharge of fumes or possible contaminants must be noted. Contact RGT to determine if fumes or matter being exhausted will interfere with adhesion.
- C. Inspect the membrane surface for cracks, blisters, chalking, crazing, and shrinking.
- D. Inspect flashing details including penetrations, curbs, expansion and transition joints, wall terminations, and drain details.
- E. Inspect and probe all field seams and patches.
Inspect and determine if substrate, insulation or deck is deteriorated and should be replaced.
- F. Inspect for insulation fastener and/or plates backing out.

3.02 Surface Preparation

- A. Any necessary repairs or replacement of deck and/or insulation must be completed.
- B. The membrane must be free of all dirt and debris prior to applying the Bond-It Wash Primer.
- C. Prepare the membrane and flashings for coating by applying the RG-500 Bond-It Wash Primer.
 1. Apply at a rate of 400-500 sq. ft./gal. A 2-3 gallon agricultural tank pressure sprayer is recommended to apply the Wash Primer. Adjust the nozzle to achieve a uniform spray pattern with a 3-4 foot arc. **NOTE:** Do not apply Wash Primer with conventional airless spray equipment as product may damage metal parts.
 2. Allow the wash primer to stand 10-15 minutes to wet out and react with Single-ply surface. Effectiveness of Wash Primer will not be sacrificed if it is allowed to sit longer than 15 minutes or if it is allowed to dry on the roof.
- D. High-pressure rinse the roof with clean water using a minimum 2,000-psi pressure washer keeping the tip within 12" of the surface. Bond-It Wash Primer, in its diluted form, is safe to rinse down drains. A squeegee is recommended to push excess water to the drains and accelerate drying. After cleaning, the EPDM roof should be "jet black" in color indicating proper chemical reaction has occurred. If appearance is dull and weathered, reapply Bond-It Wash Primer. Other Single-plys should be clean and chalk free. Surfaces must be completely dry before coating application.
- E. Any repairs to the membrane, flashings, penetrations, etc., as determined through inspection, must be completed before coating is applied. **Note: If a structurally sound, well sealed and watertight membrane is not in place, the roof is not acceptable to receive the coating system.**
 1. Tighten or resecure all terminations and assure all terminations and assure all termination bars and reglets are properly caulked.
 2. On mechanically fastened and fully adhered systems, replace backed out fasteners with new stress plates and fasteners. Relocate new fasteners adjacent to original location.
 3. Repair loose, open seams, holes, and splits with UT-40 Universal Tape®.
 4. To seal and reinforce areas around penetrations including vents, stacks, fans as well as curbs and drains, use UT-40 Universal Tape.
 5. Perimeter metal drip edges must be secure and reinforced with UT-40 Universal Tape.
 6. In low lying areas, around drains or other areas where potential water accumulation is possible, apply UT-40" Universal Tape over entire area, 24" minimum around drains.

3.03. Application

- A. General
 1. Inspect preliminary work for problem areas to ensure all preparatory work has been completed properly. Use a wet mil gauge to ensure proper coating requirement.
- B. Five (5) year Material Warranty system
 1. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq. ft. (16 wet mils, 5.6 dry mils)
 2. Apply RG-170 Elastomeric White Coating at the rate of 2.0 gal/100 sq.ft. (32 wet mils, 16.6 dry mils)

OR

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1. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq. ft. (16 wet mils, 5.6 dry mils)
2. Apply RG-180 Fibered Elastomeric White Coating at the rate of 1.5 gal/100 sq. ft. (24 wet mils, 12.5 dry mils).

C. Ten (10) year Material Warranty system

1. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils,5.6 dry mils).
2. Apply RG-130 Elastomeric Grey Coating at the rate of 1.5 gal/100 sq.ft. (24 wet mils, 12.5 dry)
3. Apply RG-170 Elastomeric White Coating at the rate of 1.5 gal/100 sq.ft. (24 wet mils, 12.5 dry)

OR

1. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils,5.6 dry mils).
2. Apply RG-180 Fibered Elastomeric White Coating at the rate of 2.0 gal/100 sq.ft. (32 wet mils, 16.6 dry mils).

D. Application Method

1. Airless spray equipment – (recommended air pressure of 2,000 @ the tip. Tip size of .35 - .45.
2. Medium nap roller.

3.04. Job Completion

- A. Inspect completed application and correct any defects.
- B. Manufacturer's representative may inspect the completed roofing system and notify the Contractor of any defects in the application.
- C. Clean up all debris, excess materials, and equipment and remove from site.
- D. Restrict traffic to only essential personnel. Provide appropriate protection against traffic and construction activities on completed roofs.

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