

SECTION 07 01 50.92
FIBER REINFORCED ELASTOMERIC ROOF REPAIR AND RESTORATION (RG-170)

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Elastomeric Roof Repair and Restoration of Aged Modified Bitumen Membrane Roofs.
- B. Elastomeric Roof Coating System for Structural Metal Roof Surfaces.
- C. Elastomeric Roof Repair and Restoration of Aged Single-Ply Membrane Roofs.
- D. Elastomeric Roof Repair and Restoration of Aged Urethane Membrane Roofs.
- E. Elastomeric Roof Coating System for Concrete Roof Surfaces.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete
- B. Section 05 73 13 - Glazed Decorative Metal Railings.
- C. Section 06 61 16 - Solid Surfacing Fabrications.
- D. Section 07 26 23 - Below-Grade Gas Retarders .
- E. Section 22 11 13 - Facility Water Distribution Piping

1.3 REFERENCES

- A. ASTM D 1644 - Standard Test Methods for Nonvolatile Content of Varnishes.
- B. ASTM D 1653 - Standard Test Methods for Water Vapor Transmission of Organic Coating Films
- C. ASTM D 2370 - Standard Test Method for Tensile Properties of Organic Coatings.
- D. ASTM D 2369 - Standard Test Method for Volatile Content of Coatings
- E. ASTM D 6083 - Standard Specification for Liquid Applied Acrylic Coating used in Roofing

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. System assembly shall be listed on the CRRC website coolroofs.org showing that the initial solar reflectance, thermal emittance, and SRI values comply with LEED requirements, local building code requirements, and any specific project requirements.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Product Literature.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods.
 - 5. Safety Data Sheets (SDS) for all components.
- C. Shop Drawings: Plans and details of liquid-applied coating system.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Field Quality Control: Submit the following.
 - 1. Inspection and testing reports
 - 2. Completed Coating Inspection Report
- F. Closeout Submittals: Submit coating manufacturer and applicator's warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing commercially available liquid roof coatings with a minimum of 10 years documented experience with applications in the United States.
- B. Installer Qualifications: Company specializing in performing the work of this section with a minimum of 3 years documented experience and approved by system manufacturer for warranted installation.
- C. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while coating work is in progress
- D. Manufacturer's Field Service: Coating manufacturer shall provide the services of a competent field representative to provide an on-site prior to issuance of Warranty.

1.7 PRE-INSTALLATION CONFERENCE

- A. Convene a pre-installation conference approximately two weeks before scheduled commencement of coating system installation and associated work.
- B. Objectives include:
 - 1. Review foreseeable methods and procedures related to roof coating work, including set up and mobilization areas for stored material and work area.
 - 2. Tour representative areas of roof coating substrates, inspect and discuss condition of substrate, penetrations and other preparatory work.
 - 3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
 - 4. Review roof coating system requirements, Drawings, Specifications and other Contract Documents.
 - 5. Review and finalize schedule related to roof coating work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
 - 6. Review required inspection, testing, certifying procedures.
 - 7. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.
 - 8. Record conference including decisions and agreements reached. Furnish a copy of records to each party attending.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Store materials off the ground or on pallets, under cover and in a cool, dry location, out of direct sunlight, in accordance with manufacturer's recommendations.
- C. Store and maintain materials above freezing.
- D. Place pallets as not to overload any single area of the roof.
- E. Follow manufacturer's directions for protection of materials prior to and during installation.
- F. Maintain copies of all current SDS for all components on site. Provide personnel with appropriate safety data information and training as it relates to the specific chemical compounds to be utilized.

1.9 SEQUENCING

- A. Apply coating in a timely manner in conjunction with work of other trades. Coordinate with other trades to avoid traffic over or against completed coating surfaces.

1.10 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not apply coating system during or with the threat of inclement weather.
 - 1. Do not begin work if rain is expected within 24 hours of application.
 - 2. Do not apply if weather does not permit complete cure prior to rain, fog, or temperatures falling below 50 degrees F.
 - 3. All surfaces to be coated must not pond water. Water that evaporates within 48 hours is not considered ponding.
 - 4. All surfaces shall be clean, dry and structurally sound.
- C. Owner will occupy the premises during the entire project. Cooperate with Owner during the construction operations to promote continued use of the facility. Coordinate scheduling with the Owner in order to relocate or protect vehicles, building occupants and building contents from damage during the construction operations.
- D. Ensure that substrate materials are dry and free of contaminants. Do not commence with the application unless substrate conditions are suitable.

1.11 WARRANTY

- A. Manufacturer's Material Warranty: Provide 5 year manufacturer's material only warranty.
- B. Manufacturer's Material Warranty: Provide ___ year manufacturer's material only warranty.
- C. Manufacturer's Warranty: Provide ___ year manufacturer's material only warranty.
- D. Coating applicator's Warranty: Provide ___ year "Applicator Maintenance Warranty" covering workmanship for all work of this section including installation of coating, flashings, metal work, and coating accessories.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kemper System America, Inc., which is located at: 1200 North America Drive; West Seneca, NY 14224; Toll Free Tel: 800-541-5455; Fax: 716-558-2978; Email:[request info \(inquiry@kempersystem.com\)](mailto:request info (inquiry@kempersystem.com)); Web:<http://www.kemper-system.com/us/eng>
- B. Acceptable Manufacturer: Kemper System Canada, Inc., which is located at: 6345 Netherhart Road, Unit 4 Mississauga, Ontario L5T 1B8 Tel: 905-624-5463. Fax: 905-624-2840. Email: inquiry@kempersystem.com. Web: www.kemper-system.com/us/eng/.
- C. Substitutions: Not permitted.
- D. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 PRODUCTS, GENERAL

- A. Materials shall be products of a single manufacturer or items standard with manufacturer of coating system. Provide secondary materials that are produced or are specifically recommended by manufacturer of coating system to ensure compatibility.
- B. Be sure to read Safety Data Sheets for all appropriate safety precautions with these products.

2.3 WHITE ELASTOMERIC ROOF COATING SYSTEM MATERIALS

- A. White Elastomeric Coating: Kemper System America, Inc. RG-170
 - 1. Physical Properties:
 - a. Vehicle Base: 100 percent acrylic resin
 - b. Weight per gallon (approx.): 11.7 lbs.
 - c. Solids by weight (ASTM D 1644): 66.3 percent.
 - d. Solids by volume: 52.9 percent.
 - e. Viscosity (ASTM D 562): > 125 KU
 - f. Elongation/Tensile @ 73 degrees F (ASTM D 2370):
 - 1) Initial Elongation: 218.8 percent
 - 2) Initial tensile Strength: 276.5 psi
 - g. 1000 Hrs. Accelerated Weathering: no cracking or checking
 - 1) Elongation: 184 percent
 - h. Permeance (ASTM D 1653A): 20.9 perms
 - i. Dry Time:
 - 1) Sets to touch 1 hour
 - 2) Between Coats 24 hours minimum
 - j. VOC: < 50 g/l
 - k. Reflectivity: 88 percent.
 - l. Thermal Emittance: 86 percent.
- B. Base Coat: Kemper System America, Inc. RG-130 Gray Elastomeric Coating
 - 1. Physical Properties:
 - a. Vehicle Base: 100 percent acrylic resin
 - b. Weight per gallon (approx.): 11.7 lbs.
 - c. Solids by weight (ASTM D 1644): 67.2 percent.
 - d. Solids by volume: 52 plus or minus 2 percent.
 - e. Viscosity (ASTM D 562): > 110 plus or minus 5 KU

- f. Elongation/Tensile @ 73 degrees F (ASTM D 2370):
 - 1) Initial Elongation: 280 percent
 - 2) Initial tensile Strength: 250 psi
 - g. 1000 Hrs. Accelerated Weathering: no cracking or checking
 - h. Permeability (ASTM E 96): 5 perms
 - i. Dry Time:
 - 1) Sets to touch 1 hour
 - 2) Between Coats 24 hours minimum
 - j. VOC: < 50 g/l
- C. Primer: Kemper System America, Inc. RG-400 Bonding Primer:
- 1. Physical Properties:
 - a. Vehicle Base: Thermoplastic polymer
 - b. Weight per Gallon: 7.0 lbs.
 - c. Solids by Weight: 38 percent
 - d. Viscosity at 77 degrees F (25 degrees C): 1,100 cps
 - e. Elongation @ 15 dry mils: 375 percent at 77 degrees F (24 degrees C)
 - f. Tensile Strength @ 15 dry mils: 150 psi at 77 degrees F (25 degrees C)
 - g. Dry Time @ 1gal/100 sq. ft.: 1 - 2 hours
 - h. VOC: 0 lb/gal (0 g/l)
 - i. Clean Up: Mineral spirits/xylene
- D. Primer: Kemper System America, Inc. RG-300 Acrylic Primer:
- 1. Physical Properties:
 - a. Vehicle Base: Rubber Modified Acrylic
 - b. Tensile Strength @ 75 degrees F (24 degrees C): 200 psi.
 - c. Elongation: 250 percent @ 75 degrees F (24 degrees C).
 - d. Solids by wt.(ASTM 2369): 60 percent plus or minus 2 percent.
 - e. Solids by volume: 50 percent plus or minus 2 percent
 - f. VOC: < 50 g/l
 - g. Clean Up:
- E. Rust Treatment: Kemper System America, Inc. RG-100 Rust Inhibiting Primer
- F. Repair Tape: Universal Tape UT-40 Universal Tape, a polyester fabric backed, synthetic butyl rubber adhesive tape.
- G. Flashing Compound: Kemper System America, Inc. RG-110 Flashing Compound is fibered reinforced acrylic cement.
- H. Wash Primer: Kemper System America, Inc. RG-500 Bond-It Wash Primer is a single-component, water based wash primer.
- I. Joint Sealant: Kemper System America, Inc. GreatSeal PE-150 Polyether sealant.
- J. Liquid Flashing: Kemper System America, Inc. GreatSeal LF-500 Polyether sealant
- 2.4 WHITE ELASTOMERIC ROOF COATING SYSTEM FOR MODIFIED BITUMEN ROOFS
- A. White Elastomeric Coating: Kemper System America, Inc. RG-170
 - B. Primer: Kemper System America, Inc. RG-300 Acrylic Primer:
 - C. Repair Options:
 - 1. Kemper System America, Inc. RG-110 Flashing Compound
 - 2. Repair Tape: Kemper System America, Inc. UT-40 Universal Tape.
 - 3. Joint Sealant: Kemper System America, Inc. GreatSeal PE-150 Polyether sealant.

4. Liquid Flashing: Kemper System America, Inc. GreatSeal LF-500 Polyether sealant

2.5 WHITE ELASTOMERIC ROOF COATING SYSTEM FOR STRUCTURAL METAL ROOFS

- A. Primer:
 1. RG-400 Universal Bonding Primer is required for all applications over Kynar or other fluoropolymer metal roof coatings.
 2. RG-300 Acrylic primer is required as a barrier coat over asphaltic residue on metal or other surfaces.
- B. Reflective Elastomeric Roof Coating System for Structural Metal Roof Surfaces.
 1. Finish Coat: RG-170 White Elastomeric
- C. Roofing Repair Options:
 1. Fastener Sealant: Kemper System America, Inc. RG-110 Flashing Compound fibered reinforced acrylic cement.
 2. Vertical Seam Sealant: Kemper System America, Inc. RG-110 Flashing Compound fibered reinforced acrylic cement or Universal Tape UT-40 Universal Tape.
 3. Seal/Lap Sealant: Kemper System America, Inc. UT-40 Universal Tape, a polyester fabric backed, synthetic butyl rubber adhesive tape. Use 4 inch wide tape for end laps, ridge, rake, skylight panels and 6 inch wide or greater tape as required on all other penetrations.
 4. Rust Treatment: Kemper System America, Inc. RG-100 Rust Inhibiting Primer applied.
- D. Metal Roof Repair Options:
 1. Fasteners: Approved self-drilling mechanical fasteners with self-sealing washers.
 2. Closure filler/replacement to match existing.
 3. Pre-formed foam closures matching panel profile.
 4. Spray-in-place urethane foam, field cut and formed to profile.
 5. ISO insulation, field cut to fill closure and coated with RG-110 Flashing Compound.

2.6 WHITE ELASTOMERIC ROOF COATING SYSTEM FOR SINGLE-PLY MEMBRANE ROOFS

- A. Base Coat: RG-130 Gray Elastomeric Base Coat
- B. White Elastomeric Coating: Kemper System America, Inc. RG-170
- C. Primer: Kemper System America, Inc. RG-400 Bonding Primer:
- D. Repair Options:
 1. Repair Tape: Kemper System America, Inc. UT-40 Universal Tape
 2. Flashing Compound: Kemper System America, Inc. RG-110 Flashing Compound.
 3. Wash Primer: Kemper System America, Inc. RG-500 Bond-It Wash Primer.

2.7 PRODUCTS FOR AGED URETHANE ROOFS

- A. Base Coat: RG-130 Gray Elastomeric Base Coat
- B. White Elastomeric Coating: Kemper System America, Inc. RG-170
- C. Repair Tape: Kemper System America, Inc. UT-40 Universal Tape

2.8 WHITE ELASTOMERIC ROOF COATING SYSTEM FOR CONCRETE ROOFS

- A. Base Coat: RG-130 Gray Elastomeric Base Coat
- B. White Elastomeric Coating: Kemper System America, Inc.. RG-170

- C. Repair Options:
 - 1. Kemper System America, Inc. RG-110 Flashing Compound
 - 2. Joint Sealant: Kemper System America, Inc. GreatSeal PE-150 Polyether sealant.
 - 3. Liquid Flashing: Kemper System America, Inc. GreatSeal LF-500 Polyether sealant.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared and conditions are suitable to proceed with the Work of this specification.
 - 1. Substrates shall be inspected and repaired as needed to provide a proper surface to receive coating system.
 - 2. Roof surface must be clean, dry, free of ponding water, and structurally sound.
 - 3. Any discharge of fumes or possible contaminants must be noted. Contact manufacturer to determine if fumes or matter being exhausted will interfere with adhesion.
 - 4. Inspect the roof surface for cracks, blisters, chalking, crazing, and shrinking.
 - 5. Inspect flashing details including penetrations, curbs, expansion and transition joints, wall terminations, and drain details.
 - 6. Inspect and probe all field seams and patches.
 - 7. Inspect and determine if substrate, insulation or deck is deteriorated and should be replaced.
 - 8. Inspect for insulation fastener and/or plates backing out.
 - 9. Identify incompatible or unsatisfactory substrates, if any.

3.2 PREPARATION

- A. Modified Bitumen Roof Surface Preparation: Surfaces to be prepared as a substrate for the roof repair system as follows:
 - 1. Any necessary repairs or replacement of deck and/or insulation must be completed.
 - 2. High-pressure rinse the roof with clean water using a minimum 2,000-psi pressure washer keeping the tip within 12 inches of the surface to remove dust, dirt, loose coatings, and foreign matter.
 - 3. Probe roof laps and penetrations to identify any points of water entry.
 - 4. 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 re-secure all terminations and assure all terminations and assure all termination bars and reglets are properly caulked.
 - 2) Repair loose, open seams, holes, and splits with UT-40 Universal Tape.
 - 3) Seal and reinforce areas around penetrations including vents, stacks, fans as well as curbs and drains, using UT-40 Universal Tape.
 - 4) Perimeter metal drip edges must be secure and reinforced with UT-40 Universal Tape.
 - 5) In low lying areas, around drains or other areas where potential water accumulation is possible, apply UT-40 Universal Tape over entire area and 24 inches minimum around drains.
 - 6) Seal heavily "alligatored" areas with Liquid Flashing. Strike smooth to provide an even surface.
- B. Metal Roof Surface Preparation: Surfaces to be prepared as a substrate for the roof repair system as follows:
 - 1. Reattach loose metal or excessive gaps with new self-drilling, fasteners with self-sealing washers.

2. Replace missing and tighten all exposed fasteners. Replace stripped fasteners with oversized of similar design as original.
 3. Replace damaged, dried, cracked or missing foam closures with either pre-formed closures matching panel profile or field install spray urethane foam, cut and formed to profile at gutter/roof panel overhang.
 4. Foam each high rib void at end panel where they overhang gutters.
 5. Seal all closures with RG-110 Flashing Compound to metal.
 6. Pressure wash roof surface with water using a minimum working pressure of 2,000 psi to remove all dirt, dust, and waste products including, but not limited to oil, rust, scale, chalkiness and unstable portions of existing coating, white rust, solvent, grease, animal fats, etc.
- C. Metal Roof Repairs: Surfaces and associated elements to be prepared as a substrate for the roof repair system as follows:
1. Any metal that is rusted through shall be replaced in kind.
 2. Rust Treatment: Scaling rust shall be wire brushed or sanded until smooth, cleaned and treated with the appropriate RG-100 Rust Inhibiting Primer and allowed to completely dry.
 3. Fastener Sealing: Encapsulate each fastener with 1" diameter (2.5 cm) cap of RG-110. Allow to dry prior to applying reflective coating.
 4. Seam, Laps and Skylight Sealing:
 - a. For vertical seams under 1/8 inch wide, use RG-110 Flashing Compound "flow coat" via bulk pump or spray rig without tip, with a 1/2 inch bead up-slope of lap. Brush Flashing Compound overlap, bridging both sides equally; or apply UT-40 Universal Tape to all vertical seams. Horizontal seams, penetrations, ridge and rake conditions apply RG-110 Flashing Compound in a traditional 3 course method using a non-coated polyester fabric, ensuring that the fabric is fully coated and embedded into the flashing compound; or use UT-40 Universal Tape.
 5. Gutters, Scuppers, Vents and Roof Drains:
 - a. All gutters, scuppers, and roof drains shall be cleaned, repaired or replaced and securely attached to structure. Coat inside of gutters that are rusted with appropriate Roof Guardian Technologies Primer after joints are cleaned and sealed with a polyether sealant, such as GreatSeal PE-150 or GreatSeal LF-500.
- D. Single Ply Roof Surface Preparation: Surfaces to be prepared as a substrate for the roof repair system as follows:
1. Any necessary repairs or replacement of deck and/or insulation must be completed.
 2. Prepare the membrane and flashings for coating by applying the RG-500 Bond-It Wash Primer.
 - a. 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.
 - b. 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.
 3. High-pressure rinse the roof with clean water using a minimum 2,000-psi pressure washer keeping the tip within 12 inches 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.
 - a. After cleaning, 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.

- b. Single-ply membranes should be clean and chalk free. Surfaces must be completely dry before coating application.
 - 4. 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.
 - a. Tighten or re-secure all terminations and assure all terminations and assure all termination bars and reglets are properly caulked.
 - b. On mechanically fastened and fully adhered systems, replace backed out fasteners with new stress plates and fasteners. Relocate new fasteners adjacent to original location.
 - c. Repair loose, open seams, holes, and splits with compatible single-ply repair material.
 - d. Seal and reinforce areas around penetrations including vents, stacks, fans as well as curbs and drains, using compatible repair material.
 - e. Perimeter metal drip edges must be secure and reinforced compatible repair material.

- E. Aged Urethane Roof Surface Preparation: Surfaces to be prepared as a substrate for the roof repair system as follows:
 - 1. Any necessary repairs or replacement of deck and/or insulation must be completed.
 - 2. Pressure wash the roof using pressure strong enough to clean but not damage the foam insulate. Detergent or TSP substitute may be used to remove excessive dirt; brushing with a firm bristle broom may be required in some areas.
 - 3. If mildew exists on the roof surface, remove by washing with a solution of detergent and bleach (1 tablespoon of laundry detergent with 1-2 pints of bleach in 1 gallon of water).
 - 4. Any repairs to the roof surface, flashings, penetrations, etc., as determined through inspection, must be completed before coating is applied. If a structurally sound, well-sealed and watertight surface is not in place, the roof is not acceptable to receive the coating system.
 - 5. Tighten or re-secure all terminations and assure all termination bars and reglets are properly caulked.
 - a. Repair loose, open seams, holes, and splits with UT-40 Universal Tape.
 - b. Repair seal and reinforce areas around penetrations including vents, stacks, fans as well as curbs and drains with UT-40 Tape.
 - c. Perimeter metal drip edges must be secure and reinforced with UT-40 Tape.
 - d. Low lying areas, around drains or other areas where potential water accumulation is possible, apply UT-40 over entire area and 24 inches minimum around drains.

- F. Concrete Roof Surface Preparation: Surfaces to be prepared as a substrate for the roof repair system as follows:
 - 1. Repair spalled concrete and allow to fully cure.
 - 2. Where ponding water conditions exist, corrective measures must be taken to eliminate water build-up prior to coating.
 - 3. High-pressure wash the surface with clean water using a minimum 2,000-psi pressure washer to remove dust, dirt, loose coatings, foreign matter, etc. Oily and/or grease deposits will require cleaners/degreasers to remove contaminants.
 - 4. Repair all cracks exceeding 1/16 inch wide with RG-110 Flashing Compound at a rate of 60 lineal ft./gallon (50 sq.ft./gallon) and feather out the edges. To repair larger cracks and protrusions, use UT-40 Universal Tape.

3.3 ROOF COATING APPLICATION

- A. General Applications Methods
 - 1. Primer Application Method
 - a. Airless spray equipment - Use only Graco HD series spray tips. Do not paint tips with the atomizer bar as these can lead to pinholes and voids in the cured coating. Tip size depends on speed and substrate being sprayed. On pitched roofs use 6-27 thru 6-31HD tips to control running and sagging. On flat or porous surfaces 6-31 thru 6-34HD tips are acceptable.
 - b. If applying with brush or roller, utilize soft brushes or standard medium or coarse nap rollers. Do not over work when rolling or brushing surface.
 - c. Use a wet mil gauge to ensure proper coating thickness.
 - d. Apply Coating as soon as the primer is dry as uncoated primer will dry tacky and pick up dust, dirt and debris. Keep the time between applying the Finish Coat to the dry primer to a minimum.
 - 2. Coating Application Method
 - a. Airless spray equipment - Rig sized to provide air pressure of 2,000 psi at the tip. Tip size of .31 to .35 and a hose size between 3/8 inch and 1/2 inch.
 - b. If applying with brush or roller, utilize soft brushes or standard medium or coarse nap rollers.
 - c. Use a wet mil gauge to ensure proper coating thickness.
 - d. When applying coatings and primers to rough and weathered surfaces, add additional product to smooth the surface and assure adequate cover.
- B. Modified Bitumen Roof Coating System:
 - 1. Inspect preliminary preparation work prior to applying finish coat for problem areas to ensure all preparatory work has been completed properly.
 - 2. 10 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply the RG-300 Acrylic Primer at 1.5 gallons per 100 square feet (24 wet mils, 12.5 dry mils). Areas of insufficient mil thickness must be re-coated.
 - b. Apply RG-170 Elastomeric White Coating at the rate of 2 gallons per 100 sq. ft. (32 wet mils, 16.5 dry mils).
- C. Metal Roof Coating System:
 - 1. Inspect preliminary preparation work prior to applying primer or finish coats coat for problem areas to ensure all preparatory work has been completed properly.
 - 2. 5 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils, 5.6 dry mils) over Kynar or other fluoropolymer metal roof coatings.
 - b. RG-300 Acrylic primer is required as a barrier coat over asphaltic residue on metal or other surfaces. Apply at the rate of 1.5 gallons per 100. sq.ft.
 - c. Apply RG-170 Elastomeric White Coating at the rate of 1.5 gallons per 100 sq.ft. Rust and seam/lap treatment as required.
 - 3. 10 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils, 5.6 dry mils) over Kynar or other fluoropolymer metal roof coatings.
 - b. RG-300 Acrylic primer is required as a barrier coat over asphaltic residue on metal or other surfaces. Apply at the rate of 1.5 gallons per 100. sq.ft.
 - c. Apply RG-130 Gray and RG-170 White at 1.5 gallons per 100 sq.ft. each coat for a total of 3 gallons per 100 sq. ft.
 - 4. 15 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils, 5.6 dry mils) over Kynar or other fluoropolymer metal roof coatings.
 - b. RG-300 Acrylic primer is required as a barrier coat over asphaltic residue on metal or other surfaces. One application of 1.5 gallons per 100. sq.ft.

- c. Apply RG-130 Gray and RG-170 White at 2 gallons per 100 sq.ft. each coat for a total of 4 gallons per 100 sq. ft.
 - D. Single Ply Roof Coating System:
 - 1. Inspect preliminary preparation work for problem areas to ensure all preparatory work has been completed properly. Use a wet mil gauge to ensure proper coating requirement.
 - 2. 5 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils, 5.6 dry mils).
 - b. Apply RG-170 Elastomeric White Coating at the rate of 2.0 gal/100 sq.ft. (32 wet mils, 16.6 dry mils).
 - 3. 10 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-400 Bonding Primer at the rate of 1.0 gal/100 sq.ft. (16 wet mils, 5.6 dry mils).
 - b. Apply RG-130 Elastomeric Grey Coating at the rate of 1.5 gal/100 sq.ft. (24 wet mils, 12.5 dry).
 - c. Apply RG-170 Elastomeric White Coating at the rate of 1.5 gal/100 sq.ft. (24 wet mils, 12.5 dry).
 - E. Aged Urethane Roof System:
 - 1. Inspect preliminary preparation work for problem areas to ensure all preparatory work has been completed properly. Use a wet mil gauge to ensure proper coating requirement.
 - 2. 5 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-130 Gray Base Coat at the rate of 1.5 gallon per 100 sq. ft. (24 wet mils, 12.5 dry mils).
 - b. Apply RG-170 Elastomeric White Coating at the rate of 1.5 gallons per 100 sq. ft. (24 wet mils, 12.5 dry mils).
 - F. Concrete Roof Coating Systems:
 - 1. Inspect preliminary preparation work prior to applying finish coat for problem areas to ensure all preparatory work has been completed properly.
 - 2. 5 YEAR MATERIAL WARRANTY SYSTEM
 - a. Apply RG-130 Gray Base Coat at the rate of 1.5 gallon per 100 sq. ft. (24 wet mils, 12.5 dry mils).
 - b. Apply RG-170 Elastomeric White Coating at the rate of 1.5 gallon per 100 sq. ft. (24 wet mils, 12.5 dry mils).
 - G. Final Inspection:
 - 1. Inspect completed application and correct any defects.
 - 2. Manufacturer's representative may inspect the completed application and notify the Contractor of any defects in the application
- 3.4 CLEANING
- A. Clean-Up: Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be restored to preconstruction condition.
 - B. Coating materials, components and accessories shall be removed from Site and taken to a legal dumping area authorized to receive such materials.
- 3.5 PROTECTION
- A. Protect building components with tarps or other suitable materials, from soil, stains, or spills at all hoisting points and areas of application.

- B. Any such damage shall be repaired at Contractor's expense to Owner's satisfaction or be restored to original condition.
- C. Provide barricades, retaining ropes, safety elements and any appropriate signage required.
- D. Eliminate construction traffic on newly placed coating systems. Do not store construction materials on unprotected coating surfaces.

END OF SECTION