

Elastomeric Roof Systems for Metal Roofs

PART 1 - GENERAL

1.01 Description of Work

- A. This general specification is for the application of a Roof Guardian Technologies (RGT) Elastomeric Coating system for a typical lap-seam architectural metal panel roof.
- B. Any situations or designs of the roof coating project that are out of the ordinary should consult with a representative of Roof Guardian Technologies.
- C. Installation is by an approved RGT Contractor to qualify project for a five, ten or fifteen year warranty from RGT direct to the building owner. Warranty fees apply.
- D. All material purchases and warranty fees must be paid prior to issuance of the warranty.

1.02 SCOPE OF WORK:

- A. Remove old mastic repairs over and adjacent to laps, seams and fasteners.
- B. Remove any other foreign materials that will prevent Roof Guardian Technologies from adhering or creating a leak free roof system.
- C. Replace damaged or weakened corroded panels.
- D. Replace damaged translucent panels and skylights.
- E. Re-attach loose metal, laps and gutters with new self-sealing fasteners.
- F. Pressure wash all roof surfaces and gutters.
- G. Re-secure or replace fasteners.
- H. Remove non-functional penetrations/curbs and patch or install new panels.
- I. Replace missing or damaged foam closures.
- J. Reseal all pipe boots, vents, gutters, AC units and roof penetrations.
- K. Treat skylight surfaces and seal.
- L. Seal all exposed fasteners.
- M. Treat panel laps and seams.
- N. Repair or replace gutters.
- O. Install reflective coating system on entire roof surface.

1.04 SYSTEM DESCRIPTION

- 1. Roof Guardian Technologies Elastomeric Roof Coating System for Metal Roofs.

1.05 SUBMITTALS

- 1. Applicator approval - Provide letter from manufacturer of roofing materials stating that applicator is a Certified Contractor for Roof Guardian Technologies.

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2. Complete materials list of all items to be furnished and installed under this Section.
3. Copy of latest edition of the Roof Guardian Technologies material specifications and installation instructions.

1.06 QUALITY ASSURANCE

- A. RGT will provide quality products in satisfactory condition in accordance to the ASTM and testing standards as listed on the specific product technical data sheets.
- B. Prior to bidding or before starting the work, the Contractor shall inspect the existing roof and other surfaces receiving the Roof Guardian Technologies elastomeric coating system, accompanied by the owner's representative. Contractor shall report in writing any unsatisfactory condition(s), which he cannot satisfactorily guarantee. The absence of any such written report shall constitute the contractor's acceptance of the surfaces and conditions and he will be responsible for a watertight installation.

1.07 DELIVERY, STORAGE & HANDLING

1. Delivery Requirements

Deliver material in manufacturer's original sealed and labeled containers and quantities required to permit continuity of application.

2. Storage Requirements

Store materials out of direct exposure to the elements. Protect material against moisture. Store materials in a heated area prior to use in cold weather. When ambient temperature is below 40°F (4°C), temperature sensitive materials must be stored in protected or heated areas and brought to the roof as needed for application after temperature reaches 50°F.

3. Handling Requirements

Handle material in such a manner as to preclude damage and contamination with moisture or foreign matter.

4. Handling Procedures Damaged Material

Any materials that are found to be damaged or stored in any manner other than as stated above shall be automatically rejected and shall be removed and replaced at contractor's expense.

1.09 JOB CONDITIONS

A. Protection Requirements.

1. **Prior to applying primer or coatings, schedule with building owner to shut down roof top ventilation equipment and vents to minimize introduction of fumes into building.** Contractor is responsible for appropriate fume and odor protection as required by the building owner and the governing regulatory agency where the property is located.
2. Protect building and grounds from overspray, staining and mechanical damage. Contractor is responsible for any overspray damage.
3. Contractor shall be held fully responsible for any damage done to vents,

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outlet boxes, flashing, etc., which is caused by the carelessness of his workmen and shall replace or repair same to the full satisfaction of the owner.

4. Review and comply with all applicable Federal, State, Local and facility safety requirements for the installation of the Roof Guardian Technologies Roofing System.

B. Environmental Requirements

1. Do not apply material during precipitation or when rain is a probability during or after application before material can set.
2. Never apply solvent-based adhesives or coatings to a damp/wet surface.
3. Minimum slope for warranted RGT Systems are 1/2" in 12".
4. Apply Water-Based (RG-130, RG-170, or RG-180) Roof Guardian Technologies Elastomeric System only when the temperature is 50°F and rising, and where no chance of precipitation will occur for 24 hours after application.
5. Protect adjacent surfaces from staining and mechanical damage during application of roofing.

1.10 WARRANTY

- A. Manufacturers Warranty – Five (5), Ten (10) and Fifteen (15) year warranties are available.

1.11 MAINTENANCE

- A. Furnish Owner with annual maintenance requirements to preserve contractor and manufacturer's warranties.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Materials manufactured or supplied by STS Coatings, Inc.(STS), 347 Hwy 289, Comfort, TX 78013, (830)995-5177.

2.03 MATERIALS

A. FASTENER SEALANT - RG-110 Flashing Compound (approx. 500 fasteners/gal).

B. SIDE LAP SEALANT WITH FLASHING COMPOUND - RG-110 Flashing Compound 70-75 lineal ft/gal.

C. SEAM/LAP SEALANT WITH UT-40 UNIVERSAL TAPE® SYSTEM

1. UT-40 Universal Tape® 4" wide for end laps, ridge, rake, skylight panels and 6" wide or greater as required on all other penetrations.

2. UT-40 Universal Tape on side laps is optional in lieu of RG-110.

D. RUST TREATMENT - RG-100 Rust Inhibiting Primer - 200 to 250 sq.ft. per gallon.

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E. PRIMER

1. RG-400 Universal Bonding Primer is **required** for all Kynar applications and as a barrier coat over asphaltic residue on other surfaces.

E. REFLECTIVE COATING –[Select one]

1. [For 5 year warranty - 2 options] *for Kynar only

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) RG-170 White Elastomeric Finish Coating - one (1) application of 1.5 gallons per 100 sq. ft. Rust and seam/lap treatment as required

OR

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) RG-180 Fibered White Elastomeric Finish Coating - one (1) application of 1.25 gallons per 100 sq. ft. Rust and seam/lap treatment as required.

2. [10 year warranty option – 2 options]

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) one application of each product (RG-130 Gray & RG-170 White) at 1.5 gallons per 100 sq.ft. for a total of 3 gallons per 100 sq. ft. Gray is required as the base coat and White as the final or weathering coat. Rust and seam/lap treatment as required

OR

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) RG-180 Fibered White Elastomeric Coating – one application of 2.0 gallons per 100 sq. ft. Rust and seam/lap treatment as required

3. [15 year warranty option – 2 options]

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) RG-130 and RG-170 Roof Guardian Technologies Elastomeric Roof Coatings – one application of each product 2 gallons per 100 sq. ft. for a total of 4 gallons per 100 sq. ft. Gray is required as the base coat and White as the final or weathering coat. Rust and seam/lap treatment are required using SP Universal Tape® System only

OR

* (A) RG-400 Bonding Primer – one application of 1.0 gallons per 100. sq.ft.

(B) RG-130 Gray Elastomeric Base Coat at 1 gallon per 100 sq. ft. then RG-180 Fibered White Elastomeric at 2 gallons per 100 sqft. for a total of 3 gallons per 100 sq. ft. Rust and seam/lap treatment are required using UT-40 Universal Tape® System only

E. MISCELLANEOUS PRODUCTS

1. Approved self-drilling mechanical fasteners with self-sealing washers.
2. Closure filler/replacement options
 - a. Pre-formed foam closures matching panel profile
 - b. Spray-in-place urethane foam, field cut and formed to profile

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- c. ISO insulation, field cut to fill closure and coated with RG-110 Flashing Compound.
- 3. Saf-T-Screen skylight fall protection device, OSHA Compliant.

PART 3 - APPLICATION

3.01 PREPARATION

- A. Reattach loose metal or excessive gaps with new self-drilling, fasteners with self-sealing washers.
- B. Replace missing and tighten all exposed fasteners. Replace stripped fasteners with oversized of similar design as original.
- C. 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. All closures to be sealed with RG-110 Flashing Compound to metal. Foam each high rib void at end panels where they overhang gutters.
- D. 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, rice dust, solvent, grease, animal fats, etc.
- E. Special treatment of fluoropolymer (Kynar™) finishes. Consult manufacturer on each condition for specified details.

3.04 FASTENER SEALING:

- A. Encapsulate each fastener with 1" diameter (2.5 cm) cap of RG-110. Allow to dry prior to applying reflective coating.

3.05 SEALING SIDE/LAPS/SKYLIGHTS:

- A. 1. RG-110 Flashing Compound: Side laps under 1/8" wide, "flow coat" via bulk pump or spray rig without tip, 1/2" bead up-slope of lap brush Flashing Compound over lap, bridging both sides equally or apply UT-40 Universal Tape to all vertical seams.
2. UT-40 Universal Tape® 4" or 6" UT-40 Universal Tape® to all horizontal seams, around all penetrations, ridge and rake conditions, and skylights (mandatory on 15 year warranty).
- B. Skylight panels to be cleaned and inspected for structural strength. Defective panels should be noted to owner in writing prior to bid by contractor and replacement noted as separate line item. All existing mastic to be scraped clean and removed. Fasteners to be sealed as above, and entire perimeter of skylight flashed with 4" UT-40.

3.06 RUST TREATMENT:

- A. Scaling rust to be wire brushed or sanded until smooth, cleaned and treated with the appropriate RG-100 Rust Inhibiting Primer and allowed to completely dry.

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3.07 GUTTER AND DRAINS:

- A. All gutters, scuppers, and roof drains must be cleaned, repaired or replaced and securely attached to structure. Inside of gutters to receive rust treatment with appropriate Roof Guardian Technologies Primer after joints are sealed with a polyether sealant, such as GreatSeal PE-150.

3.08 PRIMER for Kynar™ finish metal roofs – RG-400

- 1) Apply with a soft bristle brush, medium nap roller or airless spray. Do not over work when rolling or brushing surface.
- 2) For spray application use only Graco HD series spray tips, not paint tips with the atomizer bar as these will cause the product to go down uneven and airate the product which can lead to pinholes and voids in the cured coating. Tip size depends on speed and substrate being sprayed. On pitched roofs 6-27 thru 6-31HD tips will help to control running and sagging of the product. On flat or porous surfaces 6-31 thru 6-34HD tips are acceptable.

During the application the spray tip should not be more than 12" from the surface. Excessive distance from the surface such as 24" to 30" can allow the product to catch air and begin to cure before it is on the surface and cause pinholes and premature failure. Do not fan spray. The tip should remain 90 degrees to the surface through the entire arc of the spray overlapping each pass by 50% and 6" on the end laps.

- 3) Surface will dry tacky. Apply RG-130, RG-170 or RG-180 Elastomeric Coating per specification as soon as the primer is dry as uncoated primer will pick up dust, dirt and debris. Keep the time between applying the Elastomeric to the dry primer to a minimum. Be sure to read MSDS for all appropriate safety precautions with this product.

3.09 REFLECTIVE COATING:

A. Preparation:

- 1. Cover skylights, ventilator units and all other areas not scheduled for coating.
- 2. Except where RG-400 has been applied, hose down surface to remove any accumulated surface dust or dirt. Allow to dry completely. Repeat procedure as required. Be sure to use wet mil gauge to ensure proper coating requirement

B. Finish Coating – See Section 2.03 E for application rates for 5, 10, and 15-year warranties.

C. Apply with a soft brush (avoid excessive brushing), roller or airless spray. If using airless spray equipment, recommended air pressure of 2,000 at the tip. Tip size of .35 - .45 and hose size 3/4" to 1/2".

- END -

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