

SECTION 07120: REHABILITATION OF METAL ROOFS

PART 1 - GENERAL

1.1 SUMMARY

- A. This specification provides a waterproof, weather resistant acrylic elastomeric membrane for renovation of metal roofs of all types and shapes. GacoFlex A-30 series, along with primer and joint treatment, will provide excellent protection for metal roofs, effectively sealing seams and fastener penetrations and renewing the overall finish in order to extend the useful life of the roof assembly.
- B. GacoFlex A-3000 White will reflect the sun's ultraviolet rays. This ultraviolet radiation is normally absorbed and turned to heat. The reflectivity of GacoFlex A-3000 will help to keep roof temperatures cooler and thus reduce demand on air conditioning equipment.
- C. Suitable surfaces to receive the system include steel, galvanized steel, aluminum, copper and pre-finished metal (other than siliconized finishes). The system is designed to renew an existing finish or add a high performance finish to bare metal.

1.2 RELATED SECTIONS

- A. Cast-In-Place Concrete: Section 03300
- B. Flashing and Sheet Metal: Section 07600
- C. Drains, Vents, and Penetrations: Section 07700

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's standard submittal package including specification, installation instructions, and general information for each waterproofing material.
- B. Applicator Qualifications: Submit current "Qualified Applicator" certificate from the specified waterproofing manufacturer.

1.4 QUALIFICATIONS

- A. Primary waterproofing materials shall be a product of a single source manufacturer. The primary manufacturer shall recommend secondary materials. Manufacturer shall have a minimum of 10 years experience in the manufacture of materials of this type.
- B. Applicators shall have a minimum of 5 years experience in the application of waterproofing materials of this type specified. Applicator shall possess a current "Qualified Applicator" certificate from the specified waterproofing manufacturer.

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- C. Pre Bid Conference: 10 working days prior to bid opening there is to be a mandatory Pre-Bid Conference. Anyone not attending the Pre-Bid Conference will not be allowed to bid the project. All products considered an equal to the specified product or any changes in the scope of work of installation or specifications must be presented at the Pre-Bid Conference. If a change in the specification is accepted, it will be considered as an alternate and will be presented as a bid amendment issued 5 working days prior to the bid opening. No other changes to the specification or bid documents will be accepted.
- D. Pre-Installation Conference: Just prior to commencement of the fluid application waterproofing system, meet at the site with a representative of the coating manufacturer, the waterproofing contractor, the general contractor, the architect and other parties affected by this section. Review methods and procedures, substrate conditions, scheduling and safety.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all coating materials in the original unopened containers at 50° - 80°F (10° - 27°C) until ready for use.
- B. Follow the special handling or storage requirements of the manufacturer for cold weather, hot weather, etc.
- C. Safety: Refer to all applicable data, including, but not limited to MSDS sheets, PDS sheets, Product labels, specific instructions for specific personal protection requirements.
- D. Ventilation: General room ventilation is satisfactory.
- E. Environmental requirements: Proceed with work of this section only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.

1.6 WARRANTY

A warranty is available for commercial projects only. Contractor must be eligible for, and make application to, Gaco Western, prior to the start of work under this section.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

Acceptable Manufacturers:
Gaco Western

2.2 MATERIALS:

- A. Cleaner: GacoFlex D-09.
- B. Primer: Prime metal surfaces with GacoFlex E-5320 two component epoxy primer.
- C. Tape: GacoFlex A-36 Liquid-Tape spray or brush applied seaming tape.
- D. Coating: GacoFlex A-30 series acrylic latex elastomer. Color shall be manufacturer's standard A-3000 White unless otherwise stated. Sample of other colors if needed shall be submitted for owner's approval.

NOTE: GacoFlex A-38 may be substituted for A-30.

Special Colors: Special colors of A-38 are available on request. GacoFlex A-38 as a topcoat will simulate a new metal roof finish.

- F. Other Materials Required: Gaco Western shall approve all other materials.

PART 3 - EXECUTION

3.1 EXAMINATION:

- A. Verify that substrate is ready to receive work; surface is clean, dry and free of substances that could affect bond.
- B. Verify that all other work involved with this area, done under other sections, has been completed and accepted by the architect and general contractor prior to starting the waterproofing application.

3.2 PREPARATION

- A. Cleaning: Clean with GacoFlex D-09 etching detergent according to the manufacturer's directions, follow with thorough rinsing and allow to dry completely before priming.

1. For general cleaning, apply etching detergent with sprayer of choice, Hudson type agricultural sprayer, Conventional pressure sprayer, or airless sprayer. Use 3 to 4 foot (.91 to 1.22 m) arc pattern. Allow D-09, etching detergent to stand for 5 minutes. Clean with commercial powerwasher, >2000 psi (13.79 MPa).

CAUTION: Protect eyes from contact with cleaning solution by wearing goggles when mixing or using this product. If cleaner is applied by spray equipment, wear an alkaline mist canister respirator.

- B. Substrate Condition: Loose paint, powdery or friable rust and scale must be completely removed by power brushing to provide a sound, tight surface. Soft asphalt, and/or bitumastics and silicone caulking shall be completely removed.
- C. Inspect Fasteners: Tighten and/or replace all loose metal deck fasteners.

NOTE: Care must be taken to insure that the substrate is structurally sound and is properly prepared. The owner and/or contractor must correct any defect in the condition of the substrate existing prior to the coating; otherwise these defects may adversely affect the condition of the coating over time, necessitating maintenance and/or repair.

3.3 INSTALLATION

- A. General Primer:

1. If there is no rust, apply GacoFlex E-5320 mixed according to directions on the can, at one gallon per 350-400 sq. ft. (3.78 L / 35.5 to 37.2 m²).
2. If there is minimal rust, apply GacoFlex E-5320 mixed accordingly to directions on the can, in two passes of one gallon per 300 sq. ft. (3.78 L / 27.9 m²), resulting in a total of one gallon per 150 sq. ft. (3.78 L / 13.9 m²) of finished primer.
3. If there is pronounced rusting, apply GacoFlex E-5320 mixed accordingly to the directions on the can, at one gallon per 300 sq. ft. (3.78 L / 27.9 m²) in three passes resulting in one gallon per 100 sq. ft. (3.78 L / 9.3 m²) of finished product.

Allow drying to the touch, but no more than 7 days prior to coating. If more than 7 days pass, clean as per Section 3.2A and proceed.

- B. Seams and Fasteners: Apply A-36 Liquid-Tape by airless spray or brush or power caulking gun. Seams must be sealed with a minimum 32 wet mils (.81 mm) and a maximum 120 wet mils (3.05 mm). Fasteners must be sealed with a minimum of 16 wet mils (.41 mm). Allow to dry, and then inspect seams. Where seams show openings, re-spray with A-36, or seal off with a single-component acrylic caulk. Refer to A-3611 Product Data Sheet for spray equipment recommendations.

Alternative Seams and Fasteners Application: Apply GacoFlex 66MR, self adhesive metal roof seam sealing tape, to all seams and changes of plane. Cut 66MR to desired length, peel off release liner, and press into place removing all buckles and bubbles. Seal all fasteners with GacoFlex A-36 Liquid-Tape, at a minimum thickness of 16 wet mils (.41 mm). Apply by airless spray or brush or power caulking gun. Refer to A-3611 Product Data Sheet for spray equipment recommendations.

- C. First Basecoat: Apply one coat of GacoFlex A-30 series coating to the entire roof at a rate of .8 gallons per 100 square feet (3.03 L / 9.3 m²) (13 mils (.33 mm) wet).
- D. Second Basecoat: Apply one coat of GacoFlex A-30 series coating to the entire roof at a rate of .8 gallons per 100 square feet (3.03 L / 9.3 m²) (13 mils (.33 mm) wet).
- E. Top Coat: Apply one coat of GacoFlex A-3000 white coating to the entire roof area at a rate of .8 gallons per 100 sq. ft. (3.03 L / 9.3 m²) (13 mils (.33 mm) wet).

3.4 FIELD QUALITY CONTROL

- A. Coating Thickness: The finished dry film thickness will measure 23 mils (.58 mm). Finished dry film thickness at seams will measure 43 mils (1.09 mm), and 33 mils (.84 mm) at fasteners.
- B. Defects: There shall be no blisters, pinholes, voids or membrane defects of any kind.
- C. Variations: Any variations from specified procedures or limits found by the contractor or representatives of Gaco Western or the owner shall be immediately corrected by the contractor.