

SECTION 09970 - HEAT REFLECTIVE METAL ROOF COATING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and application of heat reflective coating systems on existing metal roof panels.
- B. Related Requirements:
 - 1. Section 01351 - Regulatory Compliance: Waste management and disposal.

1.2 QUALITY ASSURANCE

- A. Coating Field Sample:
 - 1. Apply coating system to 10' by 10' sample panel at location on the building as directed.
 - 2. Apply in accordance with specified color, sheen, workmanship, and application requirements.
 - 3. Obtain Walmart Construction Manager inspection and approval of sample panel.
 - 4. Maintain approved sample panel during construction as a standard for judging completed Work. Do not alter, move, or destroy panel until Work is completed.
 - 5. Apply scheduled final coat to sample panel simultaneous with final coat of adjacent surfaces.
- B. Coating Applicator Qualifications: Applicator having minimum 5 years documented experience in the application of coatings and approved by coating manufacturer.
- C. Coating Manufacturer's Technical Representative: A coating manufacturer's representative shall provide field service at site as required for issuing manufacturer's warranty. Inspections required:
 - 1. Surface preparation pre-installation.
 - 2. Installation of primer.
 - 3. Final inspection of coating.
- D. Coating Pre-Installation Conference:
 - 1. Convene a pre-installation conference at the site, one week prior to commencing Work of this Section.
 - 2. Contact Walmart Construction Manager two weeks prior to pre-installation conference to confirm schedule.
 - 3. Attendance:
 - a. Contractor.
 - b. Coating subcontractor.
 - c. Coating manufacturer's technical representative.
 - 4. Agenda:
 - a. Substrate condition including manufacturer's written approval.
 - b. Sequence and method of application of coating system.
 - 5. Record discussions of conference and decisions and agreements (or disagreements) reached, and affix signatures of all attendees. Furnish copy of record to the Walmart Construction Manager and to each party attending.
- E. Number of Coats: The number of coats specified is the minimum acceptable. If full coverage is not obtained with the specified number of coats, apply such additional coats as necessary to produce the required finish.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600.
- B. Deliver paint materials in sealed original labeled containers, with labels intact and readable, bearing manufacturer's name, type of paint, brand name, and batch.

- C. Do not store in sunlight. Do not allow products to freeze. Maintain stored material at temperatures between 45 degrees F. and 95 degrees F.
- D. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of coating in a clean condition, free of foreign materials and residue.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Environmental Conditions:
 - 1. Ambient Air Temperature: At least 45 degrees F., but not exceeding 100 degrees F. during application.
 - 2. Precipitation: Do not apply primer and coating materials during precipitation and when precipitation is imminent or anticipated.
 - 3. Apply coating to surfaces that are free of surface moisture.
 - 4. Ultraviolet Light: Do not allow primer to be exposed to ultraviolet light for more than four weeks prior to application of coating. If exposure exceeds four weeks, apply additional coat of primer.
- B. Do not apply paint in areas where dust is being generated.
- C. Do not spray materials when windy conditions may cause overspray to coat surfaces not intended to be coated.
- D. Waste Management:
 - 1. Comply with requirements of Section 01351.
 - 2. Remove excess paint from containers and dispose in accordance with MSDS data and local environmental regulations for paint products.
 - 3. Expose waste paint to air and allow paint to dry.
 - 4. Return reusable drums and totes to manufacturer.
 - 5. Clean and recycle containers that cannot be returned to manufacturer.

1.5 WARRANTY

- A. Comply with manufacturer's requirements for issuing material warranty.
- B. Provide manufacturer with completed Application for Warranty.
- C. Warranty Period:
 - 1. Provide 10 year material warranty against color fade, chipping, flaking, and peeling from underlying substrate.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Textured Coatings of America, Fort Lauderdale, FL (954) 581-0771, ext. 103. Contact: Andy Burns, a.burns@texcote.com.

2.2 MATERIALS

- A. Corrosion-Resistant Primer: Tex-Cote Metal Prime, by Textured Coatings of America, for spot-priming over bare galvanized, aluminum, galvalume, or cold rolled steel surfaces.
- B. Bonding Primer: Tex-Cote Tex-Bond, by Textured Coatings of America.
- C. Heat-Reflective Finish Coat: Tex-Cote Reflect-Tec, by Textured Coatings of America.
 - 1. Color: HRC1: Match Sherwin Williams #7019 "Gauntlet Gray".

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and adjacent areas where products will be applied and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.
- B. Beginning of application indicates acceptance of substrate conditions.

3.2 PREPARATION

- A. Prepare surfaces to receive coating system in accordance with coating system manufacturer's instructions and recommendations. Prior to application, surfaces must be sound, clean, dry, and free of contamination such as mildew, dirt, grease, oils, chalk and any other contamination that may affect adhesion.
- B. Completely remove loose, flaking or oxidized paint by water blasting, wire brushing, grinding or scraping. Smooth out high and low points to prevent peaks and valleys from being visible after coating.
- C. Remove rust and corrosion by wire brushing, scraping, and grinding.
- D. Completely remove mold, mildew and fungi by washing with cleaning solution composed of 1 quart bleach, 3 quarts water, 2/3 cup TSP, and 1/4 cup washing detergent.
- E. Manufacturer's Representative is required to examine prepared substrate prior to application of coating.

3.3 APPLICATION

- A. Apply coating system in accordance with manufacturer's printed installation instructions.
- B. Spot prime bare metal with corrosion-resistant primer prior to application of bonding primer. Apply corrosion-resistant primer at a rate of 300-400 square feet per gallon.
- C. Bonding Primer Test: Apply a test area of the bonding primer and allow to cure overnight. Test adhesion with the cross-hatch method. If adhesion is poor, mechanically abrade surface by sanding, reapply bonding primer and re-test for adhesion.
- D. Apply bonding primer at a rate of 350-400 square feet per gallon. Provide a white, opaque primed surface on all exposed surfaces, including edges and sealing all pores. Allow bonding primer to cure for a minimum 8 hour period under required environmental conditions.
- E. Apply heat-reflective finish coat in two coats at a rate of 400 square feet per gallon (per coat). Maintain a wet edge and provide a uniform film thickness over the entire surface. Position spray wand at recommended distance from surface to minimize overspray and achieve uniform film thickness. The second coat may be applied as soon as the first coat is dry to the touch.
- F. Comply with stormwater runoff control requirements specified in Section 01500.
- G. Completed coating system must provide a continuous pinhole free film, approximately 6-8 mils DFT.

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Representative shall conduct final inspection of coating system upon completion of job.

3.5 CLEANING

- A. As work proceeds and upon completion, promptly remove overspray and spilled, splashed, or spattered paint.

- B. During progress of work keep premises free from unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect waste, cloths, and material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.
- D. Upon completion of work, leave premises neat and clean.

3.6 PROTECTION

- A. Protect other surfaces from damage by surface preparation and painting application. Repair damage as a result of inadequate or unsuitable protection.

END OF SECTION