



Guide Specification

Not for use in California

PART 1 GENERAL

1.1 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install a high-performance, fluid-applied coating system over new or existing metal roofing as outlined in this specification.
- B. The manufacturer's application instructions for each product used are considered part of this specification and should be followed at all times.
- C. Related Sections:
 - 1. Section 05 30 00 - Metal Decking
 - 2. Section 07 60 00 - Flashing and Sheet Metal
 - 3. Section 07 72 00 - Roof Accessories
 - 4. Section 07 90 00 - Joint Protection

1.2 SYSTEM DESCRIPTION

- A. METAL ROOF COATING shall be a complete system of compatible materials supplied by NEOGARD®, a division of JONES-BLAIR® Company, to create a high performance metal roof coating system.
- B. METAL ROOF COATING shall be designated for application on the specific type of surface indicated on the drawings.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturers product literature and installation instructions.
- B. Samples: Submit samples of specified high-performance metal roof coating system. Samples shall be construed as examples of finished color only.
- C. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the high performance metal roof coating system.
- D. Warranty: Submit copy of manufacturer's standard colorfast warranty.

1.4 QUALITY ASSURANCE

- A. Supplier Qualifications: METAL ROOF COATING, as supplied by NEOGARD®, a division of JONES-BLAIR® Company, is approved for use on this project.
- B. Applicator Qualifications: Applicators shall be approved to install specified system.
- C. Requirements of Regulatory Agencies: Materials used in

the high-performance metal roof coating system shall meet Federal, State and local VOC regulations.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name and type of material.
- B. Storage and Handling: Recommended material storage temperature is 75°F (23.8°C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight. Protect all materials from freezing.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions:
 - 1. Only apply when air and surface temperature are between 40°F – 100°F (7°C - 38°C) and when the surface temperature is at least 5°F (3°C) above the dew point.
 - 2. Do not apply material unless surface to receive coating is clean and dry.
 - 3. The existing metal roofing system shall be properly fastened to the surface on which it is applied.
 - 4. Applicator shall examine existing conditions affecting this work and shall report all unsatisfactory conditions to the proper authority. Work will not proceed until these conditions have been corrected.

1.7 WARRANTY

- A. Upon request, NEOGARD® shall offer the manufacturer's standard colorfast warranty upon receipt of a properly executed warranty request form.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. NEOGARD®, a division of JONES-BLAIR® Company, P.O. Box 35286, Dallas, TX 75235, Toll Free (800) 321-6588, Fax (214) 357-7532, www.neogard.com.

2.2 MATERIALS

- A. METAL ROOF COATING:
 - 1. Primer: 33014/99951 UREPRIME® HS4 or 33010/99951 UREPRIME® HS2, white in color.
 - 2. Flashing Tape: 86218 flashing tape or approved equal having a minimum thickness of 30 mils.
 - 3. Coating: 70840 series/7953 or ACRYLITHANE™ HS2 series acrylic urethane catalyzed coating. Available in a variety of colors and clear.
 - 4. Sealant: 70991 series polyurethane sealant or approved equal.

2.3 MATERIAL PERFORMANCE CRITERIA

- A. Typical properties for the high-performance metal roof coating to be used on this project are:

DESCRIPTION	TEST METHOD	RESULTS
Q-UVA 340 (4,000 hrs)	ASTM D4587	>90% gloss retention (60°) color change DE <0.5
Xenon Arc (1,000 hrs) quartz borosilicate filters	ASTM G147-96	>95% gloss retention (60°)
EMMAQUA 290 MJ/M ²	ASTM G90-98	>95% gloss retention (60°)
Q-Trac 290 MJ/M ²	ASTM D4141	>90% gloss retention (60°)
Exterior Exposure 45° S, Dallas, TX	ASTM D1014	>90% gloss retention, 3 years
24 Hour Chemical Resistance Expo- sure (No Effect)	ASTM 1308	DI Water, 10% H ₂ SO ₄ , 10% NaOH, 25% H ₃ PO ₄ , Xylene & Mineral Spirits
Impact Resistance	ASTM D2794	160 F & 160 R

2.4 ACCESSORIES

- A. Miscellaneous materials such as adhesives, metal curbs, metal vents, drains, etc. shall be a composite part of the roof system and shall be compatible with the high-performance metal roof coating system.

2.5 MIXES

- A. In multi-pail applications, mix contents of each new pail into partially used pail to ensure color consistency and a smooth transition from pail to pail.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect existing metal roof surface to receive the high-performance metal roof coating system. All surfaces must be sound, dry, clean and free of oil, dirt, grease, was, mildew, loose or flaking paint, and other surface contaminants.
- B. Metal panels which no longer have integrity due to excessive rust and deterioration, should be replaced. All other areas of rust must be prepared and primed as required.

3.2 PREPARATION

- A. Protection:
- Keep products away from heat, sparks and flames. Do not allow the use of spark producing equipment during application and until vapors are gone. Post "No Smoking" signs.
 - The overspray and/or solvents from spraying high-performance metal roof coating materials can carry considerable distances and care should be taken to do the following.
 - Post warning signs a minimum of 100 feet from the work area.
 - Cover all intake vents near the work area.
 - Set up wind breaks when needed.
 - Minimize or exclude all personnel not directly involved with coating application.
 - Provide adequate ventilation.
 - Protect plants, vegetation and animals which might be affected by coatings. Use drop cloths or masking as required.

B. Surface Preparation:

- This section of the specification does not extensively outline procedures for preparation and finishing of drains, vents, ducts, flashings, parapet walls, sheet metal work, etc. The applicator should outline this work before work commences, and shall be performed observing good trade practices.
- Tighten all loose fasteners and replace stripped fasteners with oversized version of the same fastener, i.e. aluminum, galvanized, or stainless must remain as designed by the manufacturer.
- Metal surfaces having loose scale or rust, must be cleaned and primed prior to coating application as job conditions dictate.
- Remove dirt and foreign material detrimental to adhesion or application of roofing. Use Tri-Sodium Phosphate diluted 20:1 with water. On heavy dirt or grease, apply full strength. Broom-scrub the cleaning solution on the existing substrate to loosen oxidation and dirt and pressure wash with a minimum 3,000 psi water blaster. If algae is growing on the surface, cleaning must include bleach in the washing of the substrate. It is very important to remove all soap and/or bleach residue used to clean roof. Rinse well and allow to dry.
- Remove loose, peeling, flaking or scaling paint by scraping, sanding or blasting.
- Repair any damaged metal.
- Allow roof and other prepared surfaces to dry completely before proceeding with coating application.

3.3 APPLICATION (5 Year Colorfast Warranty)

- A. Primer: Apply 33014/99951 UREPRIME® HS4 or 33010/99951 at a rate of 200 - 300 square feet per gallon in a uniform thickness to yield 3 - 5 mils DFT and allow to cure tack free before applying topcoat.
- B. Topcoat: Apply 70840 series/7953 or ACRYLITHANE™ HS2 series acrylic urethane in desired color at a rate of 250 - 330 square feet per gallon in a uniform thickness to yield 3 - 4 mils DFT.
- C. Clear Coat (Required for 7 Year Colorfast Warranty): For ultimate gloss and durability, apply 70840-00/7953 clear or ACRYLITHANE™ HS2 clear at a rate of 650 - 1,000 square feet per gallon in a uniform thickness to yield 1 - 1.5 mils DFT.
- D. Two color samples that represent the Acrylithane or Metal Roof Coating system applied on site to 3"x5" metal coupons are required to be submitted with the warranty application. If more than one batch of finished color is applied, two samples of each color are required. Record job name, applicator name, batch number and date installed on back of each metal coupon. The color samples will be included in the warranty file and made available for Delta E verification as needed.

3.4 CLEANING

- A. Remove debris, resulting from completion of roof coating operation, from the project site.

END OF SECTION

METAL ROOF COATING

Technical Information

Mixing, Thinning and Application Instructions:

70840 series/7953 METAL ROOF COATING and ACRYLITHANE™ HS2 series acrylic urethane are two-component systems and must be mixed. A 3:1 mixing ratio is required. Mix three (3) gallons of 70840 series or ACRYLITHANE™ HS2 base material with one (1) gallon of hardener. Thinning is recommended for spray application. Up to one (1) gallon of 21092 thinner may be added per four (4) gallons of mixed coating if local VOC laws allow. For brush and roller application, thinning is not normally required. Apply 70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic urethane to thoroughly dry surfaces only. When applying 70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic coating at temperatures exceeding 85°F, adding as much as eight to sixteen (8 - 16) fluid ounces of 21093 drying retardant per 4 gallons of 70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic urethane is recommended if local VOC laws allow. Use of drying retardant prevents dry spray and undesired fast drying of the surface being covered, as well as on brushes and rollers. For application in temperatures between 35° and 55°F, it is recommended one (1) ounce (8 capfuls) of 99011 accelerator be added per four (4) catalyzed gallons of 70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic urethane.

Surface Preparation – Factory Finished Metal:

70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic urethane may be applied over most urethane or factory finished baked enamels. Surfaces must be clean and free from oil, grease, wax or other foreign matter. It is recommended surfaces be power washed and allowed to fully dry before priming. Remove any rust by wire brushing or with power tools, and solvent wipe prior to priming. Glossy surfaces must be dulled by sanding. Clean chalky surfaces thoroughly with detergent and water, and rinse with plenty of clean water. Avoid coating when rain is expected or when the temperature is within 5 degrees of the dew point. Spot prime any bare metal, then prime entire surface with one coat of 33014 White UREPRIME® HS4 or 33010 White UREPRIME® HS2 primer. 33014 UREPRIME® HS4 or 33010 UREPRIME® HS2 is a two-component primer and must be mixed at a 3:1 ratio with 99951 catalyst. UREPRIME® HS4 or UREPRIME® HS2 may be brush, roll or spray applied. Rolling or brushing is the preferred method to limit overspray. UREPRIME® HS4 or UREPRIME® HS2 may be recoated within 4 hours at 70°F and 50% relative humidity. If desired, use 21092 reducer to thin UREPRIME® HS4 or UREPRIME® HS2. Clean equipment with 21092 as well.

Surface Preparation – Galvanized or Galvalume® Surfaces:

Galvanized or Galvalume® surfaces must be clean and free from oil, grease, wax or other foreign matter. It is recommended surfaces be power washed and allowed to fully dry before priming. Remove any rust by wire brushing or with power tools, and solvent wipe prior to priming. Avoid coating when rain is expected or when the temperature is within 5 degrees of the dew point. Prime entire surface with one coat of 33014 White UREPRIME® HS4 or 33010 White UREPRIME® HS2 primer. 33014 White UREPRIME® HS4 or 33010 UREPRIME® HS2 is a two-component primer and must be mixed at a 3:1 ratio with 99951 catalyst. UREPRIME® HS4 or UREPRIME® HS2 may be brush, roll or spray applied. Rolling or brushing is the preferred method to limit overspray. UREPRIME® HS4 or UREPRIME® HS2 may be recoated within 4 hours at 70°F and 50% relative humidity. If desired, use 21092 reducer to thin UREPRIME® HS4 or UREPRIME® HS2. Clean equipment with 21092 as well.

Topcoat or Clear Finish Coat:

Refer to the METAL ROOF COATING guide specification for further details. Avoid coating when rain is expected or when the temperature is within 5% of the dew point. Apply METAL ROOF COATING in the specified color at the rate indicated in the guide specification. Thinning is not normally required for brush and roller application. If thinning is desired, use 21092 urethane reducer. Clean equipment with 21092 as well. 70840 series/7953 METAL ROOF COATING or ACRYLITHANE™ HS2 series acrylic urethane may be recoated within 4 hours at 70°F and 50% relative humidity. Refer to product data and material safety data sheets for additional information.

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