

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 to create a high performance metal roof coating system.
- B. Metal Roof Coating shall be designated for application on the specific type of substrate indicated on the drawings.

1.3 SUBMITTALS

- A. Technical Data: Submit manufacturer's product data, Safety Data Sheets (SDS) and installation instructions.
- B. Samples: Submit samples of Metal Roof Coating high performance metal roof coating system. Samples shall only be construed as examples of finished color and texture of the system.
- C. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the Metal Roof Coating high performance metal roof coating system.
- D. Warranty: Submit copy of manufacturer's standard sample warranty, identifying the terms and conditions stated in section 1.7 Warranty.

1.4 QUALITY ASSURANCE

- A. Supplier Qualifications: Metal Roof Coating, as supplied by Neogard, is approved for use on this project.
- B. Applicator Qualifications: Applicators shall be approved to install specified system.
- C. Requirement of Regulatory Agencies: Specified materials shall meet existing Federal, State and local VOC regulations.
- D. Field Sample:
 - 1. Install a field sample of at least 100 square feet at the project site or pre-selected area as agreed to by owner's representative, applicator and manufacturer.
 - 2. Apply material in accordance with manufacturer's written application instructions.
 - 3. Field sample will be standard for judging color and texture on remainder of project.
 - 4. Maintain field sample during construction for workmanship comparison.
 - 5. Do not alter, move, or destroy field sample until work is completed and approved by Owner's representative.

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°C. Handle products to prevent damage to container. All materials shall be stored in compliance with local fire and safety requirements. Avoid high temperatures and direct sunlight.

1.6 PROJECT CONDITIONS

- A. Prior to starting work, read and follow the SDS and container labels for detailed health and safety information.
- B. Proceed with application of materials only when substrate temperature is above 40°F/4°C and in dry conditions. Do not apply if precipitation is imminent, or to a damp or frosty surface. Temperature should more than 5°F/3°C above dew point and rising. If ambient and/or substrate temperatures are approaching or above 110°F/43°C, limit material application to evening hours.
- C. Coordinate fluid-applied roof coating system work with other trades. Applicator shall have sole right of access to the specified area for the time needed to complete the application and allow the vehicular traffic coatings to cure adequately.
- D. Protect plants, vegetation or other surfaces not to be coated against damage or soiling.
- E. Keep products away from spark or flame. Do use equipment which may produce sparks during application and until all vapors have dissipated. Post "No Smoking" signs.
- F. Maintain work area in a neat and orderly condition, removing empty containers, rags and debris daily from the site.

1.7 WARRANTY

- A. Upon request, Neogard shall offer a manufacturer's Colorfast (non-waterproofing) warranty for institutional, commercial, industrial, and high-rise/multi-family residential projects only, upon substantial completion of the application and receipt of a properly executed warranty request form.

PART 2 MATERIALS

2.1 MANUFACTURER

- A. Neogard, a part of Hempel, 2728 Empire Central, Dallas, TX 75235, 214-353-1600, www.neogard.com.

2.2 MATERIALS

- A. Metal Roof Coating Materials:
 - 1. Primer Base: 15050 Ureprime HS4, white in color (1505916640 base & 95041 curing agent)
 - 2. Topcoat: 57010 Acrylithane HS2, clear or tinted (5701900010 base & 95041 curing agent)
 - 3. Sealant: 47XJB (Neogard 70991) urethane sealant or approved equivalent
 - 4. Flashing Tape: 62ZJB (Neogard 86218) flashing tape

2.3 MATERIAL PERFORMANCE CRITERIA

- A. Typical properties for Acrylithane HS2 topcoat used on this project are:
 - 1. Q-UVA 340 (4,000 hrs), ASTM D4587, >90% gloss retention, (60°) color change, DE <0.5
 - 2. Xenon Arc (1,000 hrs) quartz borosilicate filters, ASTM G147-96, >95% gloss retention (60°)
 - 3. EMMAQUA 290 MJ/M2, ASTM G90-98, >95% gloss retention (60°)
 - 4. Q-Trac 290 MJ/M2, ASTM D4141, >90% gloss retention (60°)
 - 5. Exterior Exposure (45° S, Dallas, TX), ASTM D1014, >90% gloss retention (3 years)
 - 6. 24 Hour Chemical Resistance Exposure, ASTM 1308, No Effect: DI water, 10%; H2SO4, 10%; NaOH, 25%; H3PO4, xylene & mineral spirits
 - 7. Impact Resistance, ASTM D2794, 160 F & 160 R
- B. The above tested results are typical values. Individual lots may vary up to 10% from the typical value. Further technical information can be found at www.neogard.com.

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 MIXING

- A. Comply with manufacturer's instructions for mixing procedures.
- B. 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 surfaces, which will receive the Metal Roof Coating roof coating system to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contaminants.
- B. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.
- C. Verify that all critical areas around the immediate vicinity of the coating application area are suitably protected.
- D. Verify that roof has sufficient slope for water to drain.
- E. Verify all roof drains are clean and in working order.
- F. Verify that all air conditioning and air intake vents are suitably protected or closed.

3.2 PREPARATION

- A. All existing HVAC and other equipment shall be protected from any damage that could be caused by the fluid-applied roof coating application.
- B. Raising, re-setting, and protection of air conditioning equipment, ventilators, and exhaust fans may be required.
- C. Protect all adjoining areas that are not to receive the fluid-applied roof coating and provide a suitable work station to mix the coating materials.
- D. Remove all abandoned, unnecessary and non-functional equipment, deteriorated and/or water saturated roofing materials, adhesives and foreign materials down to sound substrate. Replace these areas with materials and components to match existing roof system and seal water tight. The width, adhesion and/or fastening requirements of the new materials must be compatible with the existing roof and meet local codes. Seal all edges.
- E. Inspect existing metal roof surface to receive coatings. Metal panels which no longer have integrity due to excessive rust and deterioration should be replaced. Metal panels with seam gaps greater than 1/8" should be stitched as tight as possible with additional stitch screw fasteners.
- F. Tighten all loose fasteners and replace stripped fasteners with oversized version of the same fastener, i.e. aluminum, galvanized, or stainless. Maintain integrity of original fastening pattern design.
- G. Apply polyurethane sealant around fasteners and strike or tool into place to achieve a smooth transition and allow to thoroughly cure.
- H. Loose scale or rust must be removed from metal surfaces and primed with metal primer prior to roof coating application as job conditions dictate.

- I. Round projections, machine legs, sign posts, guide wire straps, inside and outside corners, etc. can be flashed with polyurethane sealant.
- J. Clean and seal all drains, gutters, parapet walls and caps to watertight condition. Repair any damaged metal. Caulk and seal to watertight condition, all screws, seams, skylights, joints, pipes, voids, protrusions and any areas where water could enter through the roof.
- K. All roof surfaces, whether old or new, shall be cleaned using Neogard 8500 BioDegradable Cleaner at the rate of 1 part concentrate to 10 parts water. Apply the diluted cleaning solution under low pressure spray at a rate of 450 square feet per gallon and allow to stand for 15 minutes. Note: Do not allow the solution to dry. Thoroughly rinse with fresh water under high pressure to remove the cleaning solution. The use of stiff-bristle brooms or mechanical scrubbers may be required to remove heavy deposits of dirt or other contaminants from surface. Allow roof surface to thoroughly dry. Note: If algae is present on the surface, the cleaning must include bleach in the washing of the substrate. Follow local ordinances regarding runoff from this procedure.
- L. Before proceeding with coating application, ensure that substrate and repairs are clean, sound, dry (cured) and secure.

3.3 APPLICATION

- A. 5-Year Material-Only Warranty:
 - 1. Primer: Apply 15050 Ureprime HS4 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.
 - 2. Topcoat: Apply 57010 Acrylithane HS2 in desired color at a rate of 250–330 square feet per gallon in a uniform thickness to yield 3–4 mils DFT.
- B. 7-Year Colorfast Warranty:
 - 1. Primer: Apply 15050 Ureprime HS4 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.
 - 2. Topcoat: Apply 57010 Acrylithane HS2 in desired color at a rate of 250–330 square feet per gallon in a uniform thickness to yield 3–4 mils DFT.
 - 3. Clear Coat: Apply 57010 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.

3.4 CLEANING

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

3.5 PROTECTION

- A. After completion of application, do not allow traffic on coated surfaces for a period of at least 72 hours at 75°F/23°C and 50% relative humidity, or until completely cured.

END OF SECTION

Guide Specification

Metal Roof Coating

Section 09 96 00 High-Performance Coatings

Issued by: Hempel (USA) – Neogard Metal Roof Coating

This Guide Specification (“**Guide Spec**”) relates to the supplied products/system (“**System**”) and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the “**Additional Documents**”):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.

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Neogard®, a part of Hempel
2728 Empire Central - Dallas, Texas 75235 - Phone (214) 353-1600 - Fax (214) 357-7532 - www.neogard.com