DESIGN GUIDELINE

FLUID-APPLIED WATERPROOFING

(TO RESTORE METAL ROOF SYSTEMS)

PART 1 — GENERAL

1.01 DESCRIPTION

A. This design guideline is to describe the installation of the ALDOCOAT high solid silicone reflective roof coating system to waterproof and restore metal roof systems. These design guidelines provide product descriptions, application methods and site conditions required for installation. Actual site and environmental conditions may vary at time of installation.

B. Scope of Work

The scope of work includes but is not limited to the pressure washing and cleaning of the substrate, attention to all seams, flashings, skylights, and elastomeric coating application over the entire field of the roof system.

1.02 SUBMITTALS

A. Provide all product technical data and safety data sheets with all product descriptions and limitations.

B. Provide project specific procedures by addendum.

C. Provide product samples of coating system over substrate to be restored (optional).

1.03 QUALITY ASSURANCE

A. Roof coating material shall be obtained from Aldo Products Company, Inc. and contractor shall meet the criteria to be an ALDOCOAT Approved Applicator and provide all local licenses and permits for the project to begin.

B. Any deviation from this design guideline must have prior written approval from Aldo Products Company, Inc.

C. Applicator shall comply foremost with these specifications. Secondly, upon all matters where these specifications are silent, applicator shall proceed only with Aldo's recommendations and instructions.

D. No lesser quality, weight or degree of application to any extent than at least the minimum of such required by this specification's section is acceptable.

E. Provide a copy of the approved Aldo Products Company, Inc., Notice of Award/Warranty Application, submitted by the Approved Applicator.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver all products, clearly labeled, to project site in manufacturer's undamaged and unopened containers. Strictly comply with manufacturer's published instructions for handling and storage.

B. Store all materials at temperatures between 50º and 90º F (12º and 32º C). Keep all containers dry and in protected areas. Keep materials covered and out of direct sunlight at all times.

C. Store in such a manner as to avoid puncturing of all pails and drums. Remove all damaged or compromised materials from project site.

1.05 PROJECT SITE CONDITIONS

A. Contractor shall be responsible for examining site conditions prior to application of all materials. Contractor shall immediately report any unsatisfactory conditions to Aldo Products Company, Inc. and not begin any work until conditions have been addressed.

B. No coating products or accessories are to be applied over wet substrate or insulation. All wet roofing materials are to be removed and replaced.

C. All rooftop HVAC units, vents or blowers are to be set so that no fumes enter the building. HVAC condensate water is not be dispensed on roof surface; condensate pipes are to run into rooftop drains or directly into roof perimeter gutters.

D. When ambient air temperatures exceed 95º, do not continue with application. Coatings should be applied during cooler time frames, such as morning hours. Silicone coatings may be applied when ambient temperatures are 35º F and rising. Darker coating colors may blister under extreme substrate heat conditions.

E. Commencement of work implies all site conditions have been met.

PART 2 — PRODUCTS

2.01 MANUFACTURER

A. Aldo Products Company, Inc.
1604 N. Main Street
Kannapolis, NC 28081
(800) 474-6019
www.aldoproducts.com

2.02 COATING MATERIALS

A. ALDOCOAT 397 Silicone HB
Viscosity: 7000 ± 2000 cps
Elongation: 250% ± 50
Volume solids: 96%
Tensile Strength: 325 psi

2.03 ACCESSORY ITEMS

A. ALDOSEAL 399 Silicone Sealant
Viscosity: 150,000 cps ± 20,000
Volume solids: 95%
Elongation: 250%
Hardness: 50 Shore A

B. ALDOFABRIC 272 Roofing Fabric.
Weight: 3 oz. per square yard
Tensile strength: 45 psi
Fluid Absorption: excellent

B. ALDOPRIME 710 Rust Inhibitor
Viscosity: 900 cps
Total solids: 41%
Color: Gray
Clean up: soap and water

C. ALDOCOAT 384 Polyurethane (gutter coating)
Viscosity: 3000 ± 1000
Elongation: 350% ± 50
Volume solids: 68%
Tensile Strength: 1000 psi ± 50

PART 3 - EXECUTION

3.01 EXAMINATION

A. Surface preparation is the sole responsibility of the contractor and shall include all the requirements of Aldo Products Company, Inc., to maximize product adhesion to roof substrate.

3.02 SURFACE/ROOF PANEL PREPERATION

A. Metal Panels

1. Inspection of the entire surface: Inspect the entire area to be coated for metal panel structural integrity.
2. Repair of dented or damaged panels: Repair dented or damaged panels is a manner that eliminates any ponding water or “bird bath” areas. Roof panels with severe damage due to excessive oxidation or other causes are to be replaced with new panels. All new metal panels installed are to be cleaned with phosphoric acid prior to coating. New panels must be allowed to weather for a minimum of 6 months prior to coatings (optional).

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3. Pressure washing: Pressure wash substrate to remove all dirt, dust, debris, algae growth, and remains of previous paint and/or coatings that may impede the coating process. Pressure washer to have a minimum working pressure of 3,000 psi. Extra cleaning may be necessary using Tri-sodium phosphate (TSP). Allow cleaner to stand for 10-15 minutes before washing. Care should be taken not to damage existing roof or exasperate leak situations during pressure washing activities. Allow roof surface to completely dry before proceeding.
4. Install crickets on the high side of all roof top units to allow proper water flow. Ponding areas behind units are not acceptable.
5. Prime all rusted surface areas with ALDOPRIME 710 at a rate of ¾" to 1 gallon per 100 square feet. Allow primer 1-2 hours to set up before proceeding.

B. Horizontal Seams

1. All seams are to be inspected for openings. Any opening greater than 1/8" requires an additional fastener to close the opening.
2. Fill the horizontal seam by brush with ALDOSEAL 399 Silicone Sealant.
3. Apply 16 wet mils of ALDOCOAT 397 to cover seam and extend 4: on either side. Immediately lay ALDOFABRIC 272 4" fabric into wet coating. Immediately apply another 16 wet mils of ALDOCOAT 397 to saturate fabric. Allow 24 hours to set up before base coat application.

C. Vertical Seams

1. If vertical seams are open more than 1/8", add fasteners to close the gap.
2. Apply ALDOSEAL 399 Silicone Sealant (by brush) to all vertical seams.

D. Fasteners

1. Inspect all exposed fasteners for integrity.
2. All loose fasteners must be tightened back in place. If no washer is present or no fastener is present, replace with oversized fastener and new neoprene washer.
3. Apply ALDOSEAL 399 Acrylic sealant over every fastener, totally encapsulating fastener head. Fastener head profile should not be visible.

E. Ridge Caps

1) Any areas of ridge gasket should be in place. If gasket is deteriorated, a two part SPF kit can be used for repair. Contact Aldo Products Company, Inc. for kit specifics.
2) All ridge openings and cavities should be sealed with ALDOSEAL 750 Acrylic Sealant.

F. Rooftop Units and Components

1. Flashing areas of any roof top units are to be sealed with ALDOSEAL 750 Acrylic Sealant. This is to be done in a manner to insure proper water flow is maintained around unit.

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2. Skylights are to be inspected and replaced if necessary. Leaking or aged skylights can be coated with clear skylight coating to create waterproof surface. Contact Aldo products Technical Department for skylight coating product information.

G. Gutters

1. Inspect all gutter boxes for metal oxidation and deterioration. Clean and remove all debris. Pressure wash gutter box to clean thoroughly. Prime with ALDOPRIME 710 Rust Inhibitor (12-16 mils).

2. Allow primer 1-2 hours to set up and coat gutter box with ALDOCOAT 384 Polyurethane (24 wet mils). Allow 24 hours to cure. A second pass may be required.

3. For all perimeter gutters, inspect straps attached to the roof panels. Clean and prime if oxidation present following 1) above. Apply coating during application process.

3.04 SYSTEM APPLICATION

A. Coating Application

1. Base Coat: Apply ALDOCOAT 397 Silicone HB a rate of 0.75 gallons (12 wet mils) per 100 square feet for the 10 year warranty requirements. Allow a minimum of 24 hours drying time. Inspect surface for holidays, flaws or defects and correct all such conditions prior to proceeding to topcoat application.
2. Finish Coat: Apply ALDOCOAT 397 Silicone HB at a rate of 0.75 gallons (12 wet mils) per 100 square feet for the 10 year warranty requirements. Allow a minimum of 24 hours for drying time and inspect for holidays, flaws or defects and correct such conditions before notification of job completion.
3. Base and finish coat may be applied in one pass (24 wet mils) only with the written approval of Aldo Products Company, Inc.
4. An additional optional coat of ALDOCOAT 397 Silicone HB may be applied at a rate of 0.75 gallons (12 wet mils) per 100 square feet for a 15 year warranty.
5. It is the responsibility for the contractor to estimate his total usage for the project accounting for specific project factors (substrate texture, rooftop units, etc.) relying on his experience applying reflective roof coatings.

B. Final Inspection

1. Allow a minimum of 48 hours for inspection by an authorized representative of coating manufacturer. All warranty documentation, including a minimum of 6 digital photos of before, during and after application are to be submitted to representative at this time.

3.05 FIELD QUALITY ASSURANCE

A. Complete all coating manufacturer daily coating log reports to record proper application rates and as required in the warranty application package.

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B. The use of wet mil gauges to verify coating thickness is required during application.

C If spray applied, special care should be taken by the contractor to protect adjoining areas from overspray. Wind screens may be employed to limit the wind drifting of the coating.

3.06 PROTECTION AND LIMITATIONS

A. Building

1. All building surfaces are to be covered and protected against overspray or any other damage.

B. Surrounding Area

1. All adjacent parking areas to project site are to be roped off a minimum of 75 feet from spray area. All vehicles are to be moved and parked beyond this area.
2. Special care is to be taken not to spray during windy conditions. The applicator is solely responsible to monitor such weather conditions to insure no damage from overspray.

C. Foot Traffic/Walkways

1. All high traffic areas and around mechanical units should have walkways installed. Contact Aldo Products Technical Department for project specific requirements.

D. Finished Silicone Surface

1. All silicone coated surfaces are slick and slippery when wet. Use extreme caution .

3.07 SITE CLEAN UP

A. Responsibility

1. Complete site cleanup is the sole responsibility of the contractor.

B. Removal

1. All pails, containers, equipment, protective coverings and all other items brought on site by the contractor must be removed from the site and disposed of properly and in accordance with all federal, state and local regulations.
2. All work areas must be left in an undamaged condition and acceptable to building owner or facility manager.

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