



PO Box 6256
Mobile AL, 36606
1-800-771-6643

APPLICATION SPECIFICATIONS

Coating Metal Roofs — Acrylic System

Each job must be approved by American WeatherStar before the project begins to be eligible for a warranty.

PART 1 — GENERAL

1.01 DESCRIPTION

- A. The intention of this specification is to outline the procedures for the application of WeatherStar Coatings reflective roof coatings for the purpose of coating **Metal Roof** surfaces. These suggested specifications describe materials, methods and conditions necessary for the proper application of WeatherStar Coatings. Actual application requirements may vary and are the responsibility of the contractor.
- B. This specification may not outline all procedures for preparation and finishing of penetrations, drains, flashings, etc. This work should be outlined separately by the contractor before the work commences and shall be performed observing good trade practices.

1.02 APPROVED APPLICATOR

- A. All WeatherStar Coatings products shall be applied by a single, experienced and competent Approved Applicator or applicator approved by WeatherStar Coatings.
- B. Contractor shall be an Approved Applicator of WeatherStar Coatings and doing business under the same company name. Financial stability shall include no filing of bankruptcy during the past seven years.

PART 2 — PRODUCTS

2.01 COATINGS AND RELATED MATERIALS

All Materials used shall be manufactured by and or approved by WeatherStar Coatings and shall meet the following specifications.

2.02 ELASTOMERIC COATING SYSTEM

ACRYLIC 211

Type: Solar reflective coating
Viscosity: 4500 cps
Elongation: 225%
Tensile Strength: 225 psi
Density: 1 0.6 ± 2 lbs./gal.
Volume Solids: 58% ± 2% by weight
Color: White



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BRUSH GRADE 220

Type: Flashing grade, brush-able caulk
Viscosity: 70,000 cps
Density: 11.3 ± .1 lbs./gal.
Volume Solids: 60% ± 1% by weight
Color: White

BUTTER GRADE 221

Type: Flashing grade, whipped caulk
Viscosity: 90,000 cps
Density: 11.3 ± .1 lbs./gal.
Volume Solids: 66% ± 1% by weight
Color: Gray

BUTYL FLASHING GRADE 321

Type: Butyl Rubber Waterproofing Caulk
Viscosity: 70,000 cps
Elongation: 500%
Tensile Strength: 500%
Density: 8.2 lbs./gal.
Volume Solids: 45%
Color: White

RUST PRIME 910

Type: Rust primer / pre-treatment
Viscosity: 600-800 cps
Solids: 38 % ± .2
Density: 8.4 ± .2
Color: Light Grey

POLYESTER FABRIC

Type: Spunbound polyester
Tensile: 57 lbs.
Elongation: 61%

2.03 DELIVERY AND STORAGE

- A. Materials shall be delivered in their original, tightly sealed containers or unopened packages, all clearly labeled with the manufacturer's name, file number, and batch numbers.
- B. Materials shall be stored out of the weather in their original tightly sealed containers or unopened containers as recommended by the manufacturer.



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2.04 WARRANTY

- A. American WeatherStar warrants that the material supplied will meet or exceed physical properties as published. The contractor guarantees that workmanship will be free of defects in coating application. Since performance of existing roof substrate or previously applied coatings are beyond the control of American WeatherStar or the contractor, requests for additional warranty coverage shall be subject to prior approval by American WeatherStar.
- B. Comply with manufacturer's warranty application procedures. A Pre-Project Inspection Report should be submitted and approved prior to job commencement.
- C. Protection of building and occupants: All surfaces not to receive system specified shall be protected from overspray hazard, i.e. windows, doors, exterior and vehicles. Protective coverings shall be secured against wind and shall be vented if used in conjunction with applications preventing collection and moisture.

PART 3 — INSTALLATION

3.01 SURFACE PREPARATION

- A. Preparation shall include all requirements specified by WeatherStar Coatings, to ensure proper adhesion of the WeatherStar Coatings products to the existing substrate. New galvanized metal surfaces must be allowed to cure a minimum of 90 days prior to application or treated with approved surface conditioners by the manufacturer.
- B. Preparation shall include, but not be limited to the following:
 - 1. All unnecessary and non-functional equipment and debris shall be removed from the roof.
 - 2. Substrate must be pressure-washed (TSP is recommended). A minimum working pressure of 3,000 psi shall be used to remove all dirt, dust, previous paints and coatings which are delaminating and waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc.). Roto-spray tip is recommended to expedite metal panel cleaning. Powers vacuuming, brooming, high-pressure air or water washing or any combination that assures a clean surface may be used.
 - 3. HVAC condensate drains shall be properly routed to roof drains to allow roof membrane and coatings to properly drain and dry.
 - 4. All roof penetrations, curbs, vent stacks and related roof penetrations are to be flashed in accordance with roof manufacturer's specifications. All laps and wall flashings are to be repaired in accordance with roof manufacturer's specifications.



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5. Contractor shall make every effort to mechanically eliminate all ponding water areas on the roof surface prior to application of any roof coating product.

3.02 PRIMER APPLICATION

- A. Examine substrate to receive roof coating. Do not proceed with installation of the WeatherStar Coatings roof coating until all problem areas have been corrected in a manner acceptable to the manufacturer.
- B. Treatment of Residual Asphalt: Installer shall make every effort to remove all loosely adhered asphaltic roofing elements. Removal efforts must include the use of pressure-washers, scrapers, wire brushes, wire-wheels, or other similar tools.
 1. All areas with light rust must be prime coated with [Rust Prime 910](#) at an approximate rate of 1 gallon per 200 square feet. Heavily rusted areas must be primed at a rate of 1 gallon per 100 sq ft.
 2. All areas of roof that have been previously painted should also be primed with [Rust Prime 910](#) at a rate of 1 gallon per 200 square feet. An adhesion test should be conducted with one of these primers to ensure proper adhesion to the existing paint. (Note - Adhesion to the existing roof substrate depends on the condition of any existing coating.)

3.03 COATING APPLICATION

- A. Curb Flashings: All curb flashings, including cricket details, must be flashed with at least a 6" wide layer of [Acrylic 211](#), one (1) layer of [Polyester Fabric](#) and then a final layer of [Acrylic 211](#) to completely encapsulate the [Polyester Fabric](#). [Acrylic 211](#) must be feathered at least 3" beyond each side of the 6" width to allow water to flow over the seam. [Polyester Fabric](#) must be cut around all fasteners so that it lies flat. Encapsulate all fasteners using [Brush Grade 220](#).
- B. Fasteners & Gutter Straps: All fasteners must be re-tightened, all stripped fasteners must be replaced with larger diameter fasteners, and the area re-secured by adding a new fastener next to the one that was stripped. All missing fasteners must be replaced. All fasteners must be totally encapsulated with [Brush Grade 220](#). Gutter straps that are fastened above roof panels must be totally encapsulated with [Brush Grade 220](#), including the fasteners.
- C. Gaps: All large or excessive gaps existing between roof panels must be closed or made flush with self-drilling fasteners.
- D. Horizontal Seams: Reinforce all horizontal seams with one of the following options:
 1. Apply a 6" wide layer of [Acrylic 211](#), one (1) layer of 4" [Polyester Fabric](#) and then a final layer of [Acrylic 211](#) to completely encapsulate the [Polyester Fabric](#). [Acrylic 211](#) must be feathered at least 1" beyond each side of the fabric width to allow water to flow over the seam. [Polyester Fabric](#) must be cut around all fasteners so that it lies flat. [Fabric Bond 930](#) can be used as a substitute for the [Acrylic 211](#).



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2. Apply [Butyl Flashing Grade 321](#) into the seam at approximately 60- 80 dry mils. [Butyl Flashing Grade 321](#) must extend 2"-3" beyond both sides of the seam allowing water to flow over the area. It may be necessary to do this in multiple layers depending on the seam width. Extra fasteners may be necessary to properly tighten seam before any coating application.
- E. Vertical Seams: Reinforce all vertical seams with one of the following options
1. Apply a 4" wide layer of [Acrylic 211](#), one layer of 2" wide [Polyester Fabric](#) and then a final layer of [Acrylic 211](#). [Fabric Bond 930](#) may be used as a substitute for [Acrylic 211](#).
 2. Apply either [Caulk Grade 221](#) or [Brush Grade 220](#) to the vertical seam with a brush or airless sprayer to seal off any gaps in the seam. Either flashing grade material is acceptable. Feather the material until seams are no longer visible while brushing in the directions parallel to the seam.
- F. Penetrations: [Acrylic 211](#) shall be applied around base of penetration extending 4" on vertical and 4" on base. Embed 4" width of [Polyester Fabric](#) using additional mastic, as necessary. Cut [Polyester Fabric](#) to accommodate the shape of the penetration. [Fabric Bond 930](#) may be used as a substitute for [Acrylic 211](#).
- G. Rakes: All fixed rake details for the roof must be secured and sealed with 6" wide layer of [Acrylic 211](#), one (1) layer of 4" [Polyester Fabric](#) and then a final layer of [Acrylic 211](#) to completely encapsulate the [Polyester Fabric](#). [Acrylic 211](#) must be feathered at least 1" beyond each side of the 6" width to allow water to flow over the seam. [Polyester Fabric](#) must be cut around all fasteners so that it lies flat. If fixed rake metal is fastened to top of roof panel rib and extends back onto the roof, trim off excess metal and follow horizontal seam flashing procedures. [Fabric Bond 930](#) may be used as a substitute for [Acrylic 211](#). Extra fasteners may need to be added before detail is applied to ensure a water-tight rake.
- H. Ridge Caps: Except as noted, all ridge caps must be flashed with a 6" wide layer of [Acrylic 211](#), one (1) layer of 4" [Polyester Fabric](#) and then a final layer of [Acrylic 211](#) to completely encapsulate the [Polyester Fabric](#). [Acrylic 211](#) must be feathered at least 1" beyond each side of the 6" width to allow water to flow over the seam. [Polyester Fabric](#) must be cut around all fasteners so that it lies flat. [Fabric Bond 930](#) may be used as a substitute for [Acrylic 211](#). Extra fasteners may need to be added before detail is applied to ensure a water-tight rake.

3.04 APPLICATION RATES (18 MIL SYSTEM)

- A. BASE COAT: Apply base coat of [Acrylic 211](#) metal roof coating at a rate of 100 square feet per gallon. Base coat shall be applied perpendicular to the ribs of the metal roofing. Dry film thickness shall be approximately 9 mils. A stretch factor of 15% should be used as an average to determine actual metal square footage.
- B. TOP COAT: Apply final coat of [Acrylic 211](#) metal roof coating at a rate of 100 square feet per gallon. Finish coat shall be applied parallel to the ribs of the



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metal roofing. Dry film thickness shall be approximately 9 mils per coat. Total thickness of [Acrylic 211](#) is to be approximately 18 dry mils.

- C. Each coat must be allowed to dry for 24-48 hours depending on humidity and temperature. The roof is to be inspected for defects, flaws or holidays and repaired if necessary.

NOTE: [Acrylic 211](#) can be substituted with several of the other American WeatherStar products, call for details and coverage rates.

- D. Base coat and final coat are to be applied at a rate of 2 gallons per 100 square feet - 1 base coat, 1 final coat (18 dry mil average). In order to apply an 18 mil average, a stretch factor must be applied to the metal panel according to rib height (approximately 15%).

3.05 PONDING

- A. Known ponding water areas are to be repaired using commonly acceptable roofing practices so as to allow proper drainage of roof area.
- B. Ponding water areas are a sign of possible mechanical failure in the roof. Water is to be intentionally diverted from ponding areas using accepted roofing practices. Ponded areas which evaporate within 7 days (under 1/2" deep) can be top coated with [Butyl 310](#) to increase water resistance.
- C. Application of [Butyl 310](#) is to be made at 50 square feet per gallon.
- D. The [Butyl 310](#) is to be extended 2 feet beyond the ponded area.

3.06 RESTRICTIONS / LIMITATIONS

This system is to be used only in conjunction with commonly accepted roofing standards but not limited to the following:

- A. No application of materials shall commence during inclement weather or when precipitation is imminent.
- B. No materials are to be applied to wet, dirty, or frozen surfaces.
- C. In conjunction with the final inspection, all debris, containers, materials and equipment are to be properly removed from the job site. Grounds are to be cleaned, undamaged, and acceptable to the owner.
- D. Reflectivity of coatings may be reduced if roof surface is not cleaned on a regularly scheduled basis.

CAUTION: Do not apply within two hours of sunset, rain, fog or freezing temperatures. WeatherStar Coatings must be completely dry before exposing to water or foot traffic. Keep WeatherStar Coatings containers covered when not in use. Dispose of all containers in accordance with state and local environmental regulations. Keep away from children. If ingested, DO NOT induce vomiting. Call Physician immediately.