



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

APPLICATION SPECIFICATIONS

Spray Polyurethane Foam System For: Metal, Mod Bit, Smooth BUR, And Gravel BUR

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 installing **Spray Polyurethane Foam System for Metal, Smooth Bur, and Gravel Bur 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: 12 ± 2 lbs./gal.
Volume Solids: 58% ± 2% by weight
Color: White



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SILICONE 410

Type: UV Resistant Elastomeric
Elongation: 150%
Viscosity: 9,000 cps
Density: 9.2 lbs./gal
Tensile Strength: 500 ± 50 psi
Volume Solids: 68% ± 1%
Color: White

SILICONE 412

Type: UV Resistant Elastomeric
Elongation: 150%
Viscosity: 9,000 cps
Density: 9.2 lbs./gal
Tensile Strength: 550 ± 50 psi
Volume Solids: 95% ± 1%
Color: White

URETHANE 520

Type: Single Component Moisture Cure Urethane
Elongation: 350%
Viscosity: 2,000 cps
Density: 9.2 lbs./gal.
Tensile Strength: 975 psi
Volume Solids: 70% ± 1%
Color: Silver

POLYUREA 540

Type: Plural Component Pure Polyurea
Elongation: 650%
Tensile Strength: 2,840 psi
Volume Solids: 100%
Color: Light Gray

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 lot numbers.
- B. Materials shall be stored out of the weather in their original tightly sealed containers or unopened containers as recommended by the manufacturer.

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



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- 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.
- 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. A minimum working pressure of 3,000 psi shall be used to remove all dirt, dust, previous paints and coatings which are delaminating as well as waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc). Use TSP (Tri Sodium Phosphate). Contact WeatherStar Coatings for additional information.
 - 3. HVAC condensate drains shall be properly routed to roof drains or plumbed off the roof.
 - 4. Wet roof insulation and damaged membranes are to be removed and replaced as necessary to match existing specified material.
 - 5. 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.
 - 6. Contractor shall make every effort to mechanically eliminate all ponding water areas on the roof surface prior to application of any roof coating product.



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3.02 PRIMER APPLICATION

- A. Examine substrate to receive Spray Polyurethane Foam. Do not proceed with installation of the Spray Foam until all problem areas have been corrected in a manner acceptable to the manufacturer.
- B. An adhesion test should be conducted to ensure proper adhesion to the existing substrate. (Note - Adhesion to the existing roof substrate depends on the condition of current substrate or any existing coating.)
- C. Appropriate primer shall be as specified and/or at direction of the Spray Foam manufacturer. Also, foam thickness specifications are based on individual substrates waterproofed. Contact American WeatherStar for more information.

3.03 SPRAY FOAM APPLICATION

- A. Install Polyurethane Foam in a thickness of 1" minimum. Neatly terminate the sprayed-in-place polyurethane foam on all vertical surfaces, (i.e. pipe penetrations, vents, mechanical equipment, parapet walls, etc.) a minimum of 3" or 2 1/2 times as specified minimum foam thickness.

Example: If 1" minimum is specified, all vertical terminations shall have a minimum of 2 1/2" sprayed up onto the vertical surface and canted to the horizontal surface.
- B. The foam spray application shall be limited to only that amount which can be completed to full foam thickness in one day and base coat applied.
- C. The completed foam surface shall be between smooth to orange peel in surface texture. Popcorn texture is not acceptable.
- D. The completed surface shall be free of pinholes and "fisheyes" due to improper equipment calibration or climactic condition.
- E. The polyurethane foam shall be sprayed in a manner so as to achieve a full and proper spray pattern. The foam application shall be applied in passes no less than 1/2" thickness.
- F. Built Up Gravel Roofs require a minimum of 1.5" to 2" of foam.



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3.04 COATING APPLICATION RATES

- A. ACRYLIC (28 dry mils) The acrylic system should only be used on roofs that drain well.
 - 1. BASE COAT: Apply a base coat of [Acrylic 211](#) at a rate of 1.5 gallons per one hundred square feet (14-15 dry mils). Allow 24 hours to dry.
 - 2. TOP COAT: Apply a top coat of [Acrylic 211](#) at a rate of 1.5 gallons per one hundred square feet (14-15 dry mils). Allow 24 hours to dry.
- B. SILICONE 410 (26-28 dry mils)
 - 1. BASE COAT: Apply a base coat of [Silicone 410](#) at a rate of 1.25 gallons per one hundred square feet (13-14 dry mils). Allow 24 hours to dry.
 - 2. TOP COAT: Apply a top coat of [Silicone 410](#) at a rate of 1.25 gallons per one hundred square feet (13-14 dry mils). Allow 24 hours to dry.
- C. SILICONE 412 (28-30 dry mils)
 - 1. BASE COAT: Apply a base coat of [Silicone 412](#) at a rate of 1 gallon per one hundred square feet (14-15 dry mils).
 - 2. TOP COAT: Apply a top coat of [Silicone 412](#) at a rate of 1 gallon per one hundred square feet (14-15 dry mils). Allow 24 hours to dry.
- D. URETHANE (22 dry mils)
 - 1. BASE COAT: Apply a base coat of [Urethane 520](#) at a rate of 1.25 gallons per one hundred square feet (13-14 dry mils). Allow 24 hours to dry.
 - 2. TOP COAT: Apply a top coat of [Urethane 520](#) at a rate of 1.25 gallons per one hundred square feet (13-14 dry mils). Allow 24 hours to dry.
- E. POLYUREA 540 (45-48 dry mils)
 - 1. BASE COAT: Apply a base coat of [Polyurea 540](#) at a rate of 1.5 gallons per one hundred square feet (24 dry mils). Recoat immediately.
RECOAT IMMEDIATELY USING A CROSSHATCH METHOD.
Crosshatch style is defined by spraying the second coat perpendicular to the first coat.
 - 2. TOP COAT: Apply a top coat of [Polyurea 540](#) at a rate of 1.5 gallons per one hundred square feet (24 dry mils). Allow 24 hours to dry.



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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 appropriate coating to increase water resistance. Contact American WeatherStar for details.

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.