Application Guideline

URE-A-SIL ROOF RESTORATION SYSTEM OVER SMOOTH & GRAVEL BUR

To ensure warranty eligibility, each job must be approved by American WeatherStar before it begins.

PART 1 - GENERAL

1.01 DESCRIPTION

A. The intention of this guideline is to outline the procedures for the application of American WeatherStar reflective roof coatings for the purpose of coating **SMOOTH AND GRAVEL BUILT-UP ROOF SURFACE.** These suggested guidelines describe materials, methods, and conditions necessary for the proper application of the American WeatherStar roof coating system. Actual application requirements may vary and are the responsibility of the contractor.

B. This guideline 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

All American WeatherStar products shall be applied by a single, experienced, and competent contractor approved by American WeatherStar.

PART 2 - PRODUCTS

2.01 COATINGS AND RELATED MATERIALS

All materials used shall be manufactured by and or approved by American WeatherStar and shall meet the following specifications:

2.02 ELASTOMERIC COATING SYSTEM

SILICONE 410
Type: UV resistant elastomeric
Viscosity: 6000 ± 1000 cps
Elongation: 318%
Tensile strength: 500 psi
Volume solids: 69% ± 2%
Color: White, gray, tan

AROMATIC URETHANE 520
Type: Single-component moisture cure urethane
Viscosity: 2000 cps
Elongation: 350% ± 50%
Tensile strength: 975 ± 25 psi
Volume solids: 70% ± 2%
Color: Silver

URETHANE BRUSH-GRADE 522
Type: Single-component urethane flashing material
Viscosity: 30,000-40,000 cps
Elongation: 350% ± 50%
Tensile strength: 975 ± 25 psi
Volume solids: 69% ± 2%
Color: Silver

NON-FIBERED ASPHAULT EMULSION
Type: Cold Applied Roof Surface Leveler
Viscosity: 8,000-15,000 cps
Volume solids: 51% ± 2%
Color: Black

ECOCLEANER 925
Type: Surface Cleaner
VOC: 0 grams/liter
Color: Clear

HIGH SOLIDS SILICONE 412
Type: UV resistant elastomeric
Elongation: 170% + 25%
Tensile strength: 450 psi + 50 psi
Volume solids: 92% ± 2%
Color: White, gray, and tan

POLYESTER FABRIC
Type: Spunbound polyester
Viscosity: N/A
Tensile strength: 35 psi

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.

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.

PART 3 - INSTALLATION

3.01 SURFACE PREPARATION

A. Preparation shall include all requirements specified by American WeatherStar to ensure proper adhesion of the American WeatherStar products to the substrate. (An adhesion test may be necessary.)

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. Gravel Built-Up Roofs shall require all gravel to be spudded and 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, any previous paints or coatings that are delaminating, as well as waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc.). Use **ECOCLEANER 925** if necessary to remove all contaminates. Contact American WeatherStar 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.
6. All laps and wall flashings are to be repaired in accordance with roof manufacturer’s specifications.
7. 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 FOUNDATION COAT APPLICATION

A. Examine substrate to receive roof coating. Do not proceed with installation of the American WeatherStar roof coating until all problem areas have been corrected in a manner acceptable to the manufacturer.

B. **Smooth Built-Up Roofs** with areas of moderate to severe alligatoring

1. Apply **NON-FIBERED ASPHALT EMULSION** at a rate of up to 4 gallons per 100 square feet or until a smooth surface is achieved.
2. Allow emulsion to fully dry for a minimum of 48 hours before proceeding with system installation.

C. **Gravel Built-Up Roofs** after all gravel has been spudded and removed

1. Apply a foundation coat of **NON-FIBERED ASPHALT EMULSION** at a rate of 4 gallons per 100 square feet in multiple passes until a smooth surface is achieved.
2. Allow emulsion to dry 1 – 7 days between each pass.

3. After the final application allow emulsion to fully dry 7 – 14 days before proceeding with system installation.

Note: Non-Fibered Asphalt Emulsion is a water-based product. Temperature, humidity, precipitation, and application rates will all affect dry times. Asphalt emulsion may experience mud cracking when applied to heavy. Please call American Weatherstar for assistance if needed.

3.03 PREPARATION FOR COATING

A. All seams, penetrations, curbs, and parapet wall details are to be flashed using **URETHANE BRUSH-GRADE 522.**

1. **Seams:** Apply a layer of **URETHANE BRUSH-GRADE 522** into each seam. (Min 30 mils DFT)
   a. Apply **URETHANE BRUSH-GRADE 522** at a rate of 50 wet mils.
   b. Application shall be a minimum of 3” wide over the seam and feathered on to the existing roof membrane.
2. **Penetrations:** Apply **URETHANE BRUSH-GRADE 522** at a rate of 90 wet mils. (Min 60 mils DFT)
   a. Application shall encapsulate the area around the penetration.
   b. Application shall extend a minimum of 3” on to the existing roof membrane.
   c. Feather the application so as to not cause water damming.
3. **Parapet Walls:** Apply **URETHANE BRUSH-GRADE 522** to all seams and flashings on parapet walls.
   a. **Seams:** Apply a layer of **URETHANE BRUSH-GRADE 522** into each seam. (Min 30 mils DFT)
      1. Apply **URETHANE BRUSH-GRADE 522** at a rate of 50 wet mils.
      2. Application shall be a minimum of 3” wide over the seam.
   b. **Flashings:** Apply a layer of **URETHANE BRUSH-GRADE 522** at flashing points. (Min 60 mils DFT)
      1. Apply **URETHANE BRUSH-GRADE 522** as required to seal any existing flashings at a rate of 90 wet mils.
      2. Application should be made to insure water tightness of the flashing detail.

B. Repair all cracks and splits in roof using **URETHANE BRUSH-GRADE 522** just as each seam is repaired.

1. Cracks or splits less than ¼”
   a. Apply a layer of **URETHANE BRUSH-GRADE 522** into each crack or split.
   b. Apply **URETHANE BRUSH-GRADE 522** at a maximum rate of 100 wet mils.
   c. Multiple pass may be required for deep cracks
   d. Application shall extend a minimum of 3” wide over the crack and feathered on to the existing roof membrane.
2. Cracks or splits greater than ¼”
   a. Apply a layer of **URETHANE BRUSH-GRADE 522** into each crack or split.
   b. Apply **URETHANE BRUSH-GRADE 522** at a maximum rate of 100 wet mils.
   c. Multiple pass may be required for deep cracks.
   d. Application shall extend a minimum of 3” wide over the crack and feathered on to the existing roof membrane.
   e. Once crack is filled and leveled with existing roofing membrane, apply suitable width **POLYESTER FABRIC** as to extend 2” on either side of the crack.

f. Once fabric is embedded, encapsulate with **AROMATIC URETHANE 520**.

3. If cracks predominate the existing roofing membrane, an AWS Full Fabric System may be required.

Note: Please refer to Application Details for Three Course Fabric options on A & B above. Please call American WeatherStar for assistance if needed.

3.04 APPLICATION RATES

A. **12 Year System Requirement (30 mil Urethane-Silicone System)**

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 520** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Top Coat:**
   - **Standard Option:** Apply a top coat of **SILICONE 410** at a rate of 1.5 gallons per 100 square feet.
   - **High Solids Option:** Apply a top coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.1 gallons per 100 square feet.

B. **15 Year System Requirement (35 mil Urethane-Silicone System)**

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 520** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Top Coat:**
   - **Standard Option:** Apply coat of **SILICONE 410** at a rate of 2 gallons per 100 square feet
   - **High Solids Option:** Apply coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.5 gallons per 100 square feet.

C. **20 Year System Requirement (40 mil Urethane-Silicone System)**

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 520** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Intermediate Coat:** Apply coat of **SILICONE 410** at a rate of 1.25 gallons per 100 square feet
3. **Top Coat:**
   - **Standard Option:** Apply coat of **SILICONE 410** at a rate of 1.25 gallons per 100 square feet
   - **High Solids Option:** Apply coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.8 gallons per 100 square feet.

D. 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.

E. Each contractor should estimate coating requirements based on actual experience and needs to figure in losses due to applicator experience, surface texture, wind, waste, and other factors that can affect actual gallons required.

F. It is the applicator's responsibility to verify wet and dry mil thickness during the application process to ensure proper dry mil thickness of the total roofing system.

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.

C. Ponding water is NOT excluded from the warranty of the **URE-A-SIL** roofing system when properly installed by an American WeatherStar Approved Contractor.

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 thinning of materials is permitted.

C. No materials are to be applied to wet, dirty, or frozen surfaces.

D. 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.

E. 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. The American WeatherStar roof coating system must be completely dry before exposing to water or foot traffic. Keep American WeatherStar 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.