Application Guideline

ENVIR-O-SIL ROOF RESTORATION SYSTEM OVER MODIFIED BITUMEN

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 **MODIFIED BITUMEN ROOF SURFACES.** 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

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

TERMINATOR 622
Type: Siliconized urethane sealant
Volume solids: 100%
Color: White or gray

ACRYLIC BONDING PRIMER 905
Type: Primer/surface conditioner
Viscosity: 600-800 cps
Elongation: N/A
Tensile strength: N/A
Volume solids: 38% ± 2%
Color: Black

BRUSH GRADE SILICONE 422
Type: Silicone flashing material
Elongation: >275% at 73°F
Tensile strength: 130 psi at 73°F
Volume solids: 96% ± 2%
Color: White

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

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

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.
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 PRIMER APPLICATION

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.

A. **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.

B. **Asphalt Bleed-thru: ACRYLIC BONDING PRIMER 905** application directly to Modified Bitumen Substrate is to prevent asphalt bleed-through. If Asphalt Bleed-thru is not an issue, primer is not necessary over Modified Bitumen.

C. **Previously Coated:** All areas of the roof that have been previously coated must be primed with **ACRYLIC BONDING PRIMER 905** at a rate of 1 gallon per 100 square feet. An adhesion test should be conducted to ensure proper adhesion to the existing coating. Adhesion to the existing roof substrate depends on the condition of any existing coating.

3.03 PREPARATION FOR COATING

A. All seams, penetrations, curbs, and parapet wall details are to be flashed using **TERMINATOR 622**.

1. **Seams:** Apply a layer of **TERMINATOR 622** into each seam. (Min 30 mils DFT)
    a. Apply **TERMINATOR 622** at a rate of 30 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 **TERMINATOR 622** at a rate of 60 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 **TERMINATOR 622** to all seams and flashings on parapet walls.
    a. **Seams:** Apply a layer of **TERMINATOR 622** into each seam. (Min 30 mils DFT)
        1. Apply **TERMINATOR 622** at a rate of 30 wet mils.
        2. Application shall be a minimum of 3" wide over the seam.
    b. **Flashings:** Apply a layer of **TERMINATOR 622** at flashing points. (Min 60 mils DFT)
        1. Apply **TERMINATOR 622** as required to any existing flashings at a rate of 60 wet mils.
        2. Application should be made to insure water tightness of the flashing detail.

B. Repair all cracks and splits in roof using **TERMINATOR 622** in the same manner as each seam is repaired.

1. Cracks or splits less than ¼"
    a. Apply a layer of **TERMINATOR 622** into each crack or split.
    b. 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 **TERMINATOR 622** into each crack or split.
    b. Application shall extend a minimum of 3" wide over the crack and feathered on to the existing roof membrane.
    c. 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.
    d. Once fabric is embedded, encapsulate with **TERMINATOR 622**.
3. If cracks predominate the existing roofing membrane, an AWS Full Fabric System may be required.

Note: TERMINATOR 622 can be substituted with **SILICONE BRUSH GRADE 422**

3.04 APPLICATION RATES

Note: If coating is being applied with spray equipment or Super Spreader, back-roll base coat material in order to penetrate existing system.

A. **<u>10 Year System Requirement (30 mil Envir-O-Sil System)</u>**

1. **BASE COAT:** Apply a base coat of the **HIGH SOLIDS SILICONE 412** at 1.1 gallon per 100 square feet.

2. **TOP COAT:** Apply a top coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.1 gallon per 100 square feet.

B. **15 Year System Requirement (35 mil Envir-O-Sil System)**

1. **BASE COAT:** Apply a base coat of the **HIGH SOLIDS SILICONE 412** at 1.25 gallons per 100 square feet.
2. **TOP COAT:** Apply a top coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.25 gallons per 100 square feet.

C. **20 Year System Requirement (40 mil Envir-O-Sil System)**

1. **BASE COAT:** Apply a base coat of the **HIGH SOLIDS SILICONE 412** at 1.5 gallons per 100 square feet.
2. **TOP COAT:** Apply a top coat of **HIGH SOLIDS SILICONE 412** at a rate of 1.5 gallons per 100 square feet.

Note: A single coat of **HIGH SOLIDS SILICONE 412** is permissible given the required dry film thickness is achieved for the respective term length.

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 **ENVIR-O-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.