



## Application Guideline

### URE-A-MAX ECO 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

###### ALIPHATIC URETHANE 510-CA

Type: Single-component moisture cure urethane  
Viscosity: 100 KU  
Elongation: 230%  
Tensile strength: 2300 psi  
Volume solids: 76.7%  
Color: Bright white

###### AROMATIC URETHANE 512-CA

Type: Single-component moisture cure urethane  
Viscosity: 6000 cps  
Elongation: 375%  
Tensile strength: 1,000 psi  
Volume solids: 77%  
Color: Dark Grey

###### ECOCLEANER 925

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

###### URETHANE BRUSH-GRADE 524-CA

Type: Single-component urethane flashing material  
Viscosity: 100 KU  
Elongation: 230%  
Tensile strength: 2,300 psi  
Volume solids: 76.7%  
Color: White

###### POLYESTER FABRIC

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

###### NON-FIBERED ASPHALT EMULSION

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

##### 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.



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- 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.
- 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 alligating
  - 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.



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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 524-CA**.
  1. **Seams:** Apply a layer of **URETHANE BRUSH-GRADE 524-CA** into each seam. (Min 30 mils DFT)
    - a. Apply **URETHANE BRUSH-GRADE 524-CA** 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 524-CA** 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 524-CA** to all seams and flashings on parapet walls.
    - a. **Seams:** Apply a layer of **URETHANE BRUSH-GRADE 524-CA** into each seam. (Min 30 mils DFT)
      1. Apply **URETHANE BRUSH-GRADE 524-CA** 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 524-CA** at flashing points. (Min 60 mils DFT)
      1. Apply **URETHANE BRUSH-GRADE 524-CA** 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 524-CA** in the same manner as each seam is repaired.
  1. Cracks or splits less than 1/4"
    - a. Apply a layer of **URETHANE BRUSH-GRADE 524-CA** into each crack or split.
    - b. Apply **URETHANE BRUSH-GRADE 524-CA** 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 1/4"
    - a. Apply a layer of **URETHANE BRUSH-GRADE 524-CA** into each crack or split.
    - b. Apply **URETHANE BRUSH-GRADE 524-CA** at a maximum rate of 100 wet mils.
    - c. Multiple pass may be required for deep cracks.



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- 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 512-CA**.
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. 10 Year System Requirement (30 mil Hybrid Urethane System)

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 512-CA** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Top Coat:** Apply a top coat of **ALIPHATIC URETHANE 510-CA** roof coating at a rate of 1.5 gallons per 100 square feet.

#### B. 15 Year System Requirement (40 mil Hybrid Urethane System)

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 512-CA** roof coating at a rate of 1.25 gallons per 100 square feet.
2. **Intermediate Coat:** Apply an intermediate top coat of **AROMATIC URETHANE 512-CA** roof coating at a rate of 1.25 gallons per 100 square feet.
3. **Top Coat:** Apply a top coat of **ALIPHATIC URETHANE 510-CA** roof coating at a rate of 1.5 gallons per 100 square feet.

#### C. 20 Year System Requirement (45 mil Hybrid Urethane System)

1. **Base Coat:** Apply base coat of **AROMATIC URETHANE 512-CA** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Intermediate Coat:** Apply an intermediate top coat of **AROMATIC URETHANE 512-CA** roof coating at a rate of 1.5 gallons per 100 square feet.
3. **Top Coat:** Apply a top coat of **ALIPHATIC URETHANE 510-CA** roof coating at a rate of 1.5 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.



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- 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 additional **ALIPHATIC URETHANE 510-CA** to increase water resistance.
- C. Application of **ALIPHATIC URETHANE 510-CA** is to be made at 2 gallon per 100 square feet.
- D. The **ALIPHATIC URETHANE 510-CA** 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 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.