



Application Guideline
**RE-SIL ROOF RESTORATION SYSTEM
RECOATING SILICONE COATED ROOFS**

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 recoating a **SILICONE COATED ROOF SYSTEM**. 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.
- C. Adhesion to these substrates is specific to each silicone coated roof. Field adhesion tests are highly recommended.
- D. The condition of the existing substrate and silicone coating will determine if the Silicone Recoat can be successful. A pre-project approval from American WeatherStar is recommended.

1.02 APPROVED APPLICATOR

All American WeatherStar products shall be applied by a single, experienced, and competent Approved Contractor or applicator 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, and tan

HIGH SOLIDS SILICONE 412

Type: UV resistant elastomeric
Elongation: >192% at 73°F
Tensile strength: 331 psi at 73°F
Volume solids: 96% ± 2%
Color: White, gray, and tan

SILICONE BRUSH-GRADE 422

Type: UV resistant silicone sealant
Viscosity: 30,000 cps
Elongation: 275% at 73°F ± 20%
Tensile strength: 130 psi at 73°F ± 20 psi
Volume solids: 96% ± 3%
Color: White

TERMINATOR 622

Type: Moisture-cured sealant
Viscosity: 30,000 cps
Elongation: 500% at 73°F ± 20%
Tensile strength: 200 psi at 73°F ± 20 psi
Volume solids: 100%
Color: White or gray

POLYESTER FABRIC

Type: Spun-bound polyester
Viscosity: N/A
Tensile strength: 35 psi



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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 TSP (Tri Sodium Phosphate) if necessary to remove all contaminants. 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

- 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. There is not a suitable primer for coating over silicone. In most situations, silicone will adhere to clean dry silicone. An adhesion test is required to confirm adequate adhesion.



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3.03 PREPARATION FOR COATING

- A. Any previous detail work that does not meet American WeatherStar recommended detail applications should be photographed and discussed with AWS representative prior to deviating from the AWS recommended detail.
- B. Previously completed details may not require additional material application.
- C. Any questions about existing Silicone system preparation prior to coating should be brought to the attention of an American WeatherStar representative prior to installing the Re-Sil System
- D. There may be waterproofing issues on each specific roof that is not covered in this guide. Please call American WeatherStar for details.
- E. For Silicone over Polyurethane Foam Roofs follow Section 3.01 and 3.03 of the American WeatherStar SPF recoat guide for repairing aged SPF. The section below does not cover SPF roofs.
- F. All exposed seams, penetrations, curbs, and parapet wall details are to be flashed using either **TERMINATOR 622**, or **BRUSH GRADE SILICONE 422**,
 - 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 mills.
 - 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 mills. (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 to prevent 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 mills.
 - 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 seal any existing flashings at a rate of 60 wet mills.
 - 2. Application should be made to ensure water tightness of the flashing detail.
- G. 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 1/4"
 - a. Apply a layer of **TERMINATOR 622** into each crack or split.
 - b. Apply **TERMINATOR 622** as required to fill crack or split.
 - c. Multiple passes 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 **TERMINATOR 622** into each crack or split.
 - b. Apply **TERMINATOR 622** as needed to fill crack or void.



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- c. Multiple passes 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 roof membrane, apply suitable width **POLYESTER FABRIC** as to extend 2" on either side of the crack.
- f. Once fabric is embedded, encapsulate with **TERMINATOR 622**.

Note: If cracks predominate the existing roofing membrane, an American WeatherStar Full Fabric System may be required. **BRUSH-GRADE SILICONE 422** may be used as a substitute to **TERMINATOR 622**. Check adhesion of both to determine best option.

3.04 APPLICATION RATES

Note: These rates assume that existing silicone system is in reasonably good condition with more than 10 mils remaining over existing roof. If coating is being applied with spray equipment or Super Spreader, back roll base coat to penetrate existing system.

A. 10 Year System Requirement (25 mil Elast-O-Sil System)

1. **Base Coat:** Apply base coat of **SILICONE 410** roof coating at a rate of 1.25 gallons per 100 square feet.
2. **Top Coat:** Apply a top coat of **SILICONE 410** roof coating at a rate of 1.25 gallons per 100 square feet.

B. 10 Year System Requirement (25 mil Envir-O-Sil System) using HIGH SOLIDS SILICONE 412

1. **Top Coat:** Apply a top coat of **HIGH SOLIDS SILICONE 412** roof coating at a rate of 1.75 gallons per 100 square feet.

C. 15 Year System Requirement (30 mil Elast-O-Sil System)

1. **Base Coat:** Apply base coat of **SILICONE 410** roof coating at a rate of 1.5 gallons per 100 square feet.
2. **Top Coat:** Apply a top coat of **SILICONE 410** roof coating at a rate of 1.5 gallons per 100 square feet.

D. 15 Year System Requirement (30 mil Envir-O-Sil System) using HIGH SOLIDS SILICONE 412

1. **Top Coat:** Apply a top coat of **HIGH SOLIDS SILICONE 412** roof coating at a rate of 2 gallons per 100 square feet.

- E. 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.
- F. 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 gallons required.
- G. 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 WATER

- 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 a properly installed American WeatherStar Re-Sil System.



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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.