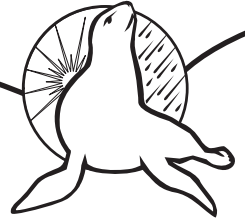


Energy Seal Coatings



INSTALLATION SPECIFICATIONS FOR **ASPHALT EMULSION FULL FABRIC REINFORCED SYSTEM**

1.0 SCOPE

The intention of this specification is to outline the procedures for the application of Energy Seal Coatings reflective roof coatings for the purpose of coating ASPHALT EMULSION recovery roof surfaces. These suggested specifications describe materials, methods and conditions necessary for the proper application of Energy Seal Coatings. Actual application requirements are the responsibility of the installer.

2.0 MATERIALS

All Materials used shall be manufactured by and or approved by Advanced Coating Systems, Inc. Please refer to our product data sheets for technical specifications:

2.1 ASPHALT EMULSION System

ACU-SHIELD	Acrylic, elastomeric roof coating.
ACU-FABRIC	44" x 328' spunbound polyester reinforcing fabric.
ACU-TAC	Advanced bonding adhesive to secure polyester scrim.
ACU-WASH	Pre-treatment, water soluble detergent.
ASPHALT EMULSION	Water-based asphalt emulsion.

2.2 Delivery and storage:

2.3 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.

2.4 Materials shall be stored out of the weather in their original tightly sealed containers or unopened containers as recommended by the manufacturer. Do not allow liquid coating to freeze.

3.0 SURFACE PREPARATION

3.1 Roof surface shall be repaired, made sound and watertight prior to application of ASPHALT EMULSION reinforced roofing system using one or more of the following steps.

3.2 Remove all loose gravel, dirt, dust and foreign debris by vacuum, washing, sweeping or power blower. Substrate must be pressure-washed with ACU-WASH. A minimum working pressure of 2,500 psi shall be used to remove all dirt, dust, previous paints & coatings which are delaminating as well as waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc). Thoroughly rinse roof surface after cleaning.

3.3 Ponding Water: Contractor shall mechanically eliminate all ponding water areas on the roof prior to application of roof coatings ("Ponding water" is defined as water which does not properly drain and remains for more than 48 hours).

3.4 HVAC condensate drains shall be permanently routed to roof drains or off roof so as to not adversely affect roof coating system.

3.5 It is vital to perform an infrared survey of the roof to identify wet insulation. Failure to remove wet insulation could lead to advanced deterioration of the Energy Seal Coating system and insulation, and eventually it could damage the roof deck. Once the wet insulation is removed and repairs are made, surface preparation and application of the Energy Seal Coating system can begin.

3.6 Inspect the condition of flashing details adjacent to protrusions, penetrations, roof mounted equipment, curbs,

walls, parapets, drains and roof edge to ensure that details are acceptable and will maintain a weather-tight installation after properly reinforced and coated.

- 3.7 Any unsound areas in the roof deck or insulation, including blisters, delimitation, deterioration, excessive moisture content, etc. shall be repaired or replaced. All blisters, delimitations, wrinkles and loose areas shall be repaired according to standard roofing practices. Installer is to determine the most appropriate and efficient way to repair damaged areas.

4.0 ASPHALT EMULSION SYSTEM APPLICATION

- 4.1 Over a properly prepared surface, apply a coat of ASPHALT EMULSION at a rate of 6 gallons per 100 sq.ft. Immediately following and starting at the low edge of the roof, embed a full width of ACU-FABRIC 44" x 328' continuing up the roof with full width sheets. Overlap each ply a minimum of 3". End laps shall overlap a minimum of 4". Lightly broom each ply of ACU-FABRIC to achieve full saturation having no wrinkles or voids. ACU-FABRIC shall terminate 2" above cant strip. DO NOT walk on ACU-FABRIC during application while ASPHALT EMULSION is still wet causing displacement of the ASPHALT EMULSION. Allow to cure a minimum of 2 days before applying ACU-SHIELD.

5.0 COATING APPLICATION

- 5.1 Examine substrate to receive roof coating. Do not proceed with installation of Energy Seal Coatings until unsatisfactory conditions have been corrected in a manner acceptable to the manufacturer.
- 5.2 Use a wet film gauge to determine coating thickness every 500 sq.ft. The wet film thickness should be at least twice as thick as the desired dry film thickness per coat. For instance, one coat of ACU-SHIELD is to be applied at a thickness of 10 mils. The wet film thickness should be 20 mils.
- 5.3 A manageable area of the roof shall be primed with ACU-TAC at a rate of 1.5 gallons per 100 square feet. While the ACU-TAC is wet roll out 44" ACU-FABRIC, making sure there are no wrinkles or puckers in the ACU-FABRIC. Then apply a second coat of ACU-TAC to the top of the ACU-FABRIC at a rate of 1.5 gallons per 100 square feet, making sure the ACU-TAC is completely saturated. Total application rate is 3 gallons of ACU-TAC applied to 100 square feet of ACU-FABRIC. Allow 24 hours to dry before top coating with ACU-SHIELD. A fog coat of ACU-SHIELD may be used prior to the application of ACU-SHIELD to lessen the tackiness of ACU-TAC.
- 5.4 Apply ACU-SHIELD elastomeric coating by airless spray equipment, using a multi-pass spray technique to ensure even application to the roof surface. Use a wet film gauge often to measure film thickness. Wet film thickness should be twice as thick as the desired dry film thickness.
- 5.5 Apply first coat of ACU-SHIELD at a rate of 1.25 gallons per 100 square feet. First coat shall be applied perpendicular to the seams of the ACU-FABRIC. Dry film thickness shall be approximately 10 mils. Back roll ACU-SHIELD so as to completely penetrate the ACU-FABRIC surface.
- 5.6 Apply second coat of ACU-SHIELD at a rate of 1.25 gallons per 100 square feet. Second coat shall be applied perpendicular to the first coat. Dry film thickness shall be approximately 10 mils.
- 5.7 Apply third coat of ACU-SHIELD at a rate of 1.25 gallons per 100 square feet. Third coat shall be applied perpendicular to the second coat. Dry film thickness shall be approximately 10 mils.
- 5.8 Apply ACU-GLOSS clear acrylic coating (at a rate of 250 square feet per gallon, 2 - 3 dry mils) is to be applied only after the ACU-SHIELD has thoroughly cured and dried for at least 24 hours.
- 5.9 Each coat must be allowed to cure for 24 - 48 hours depending on humidity and temperature. The roof is to be inspected for defects, flaws or holidays and repaired if necessary before a subsequent coat is applied.

6.0 RESTRICTIONS / LIMITATIONS

- 6.1 This system is to be used only in conjunction with commonly accepted roofing standards but not limited to the following:
- 6.2 No application of materials shall commence during inclement weather or when precipitation is imminent. **No thinning of materials is required.**
- 6.3 No materials are to be applied to wet, dirty, or frozen surfaces.

- 6.4 No materials are to be applied at temperatures below 40° F.
- 6.5 Do not apply when dew point is within 5°F of the surface temperature or if freezing temperatures (32°F or lower) are forecasted for the following 24 hours after application of coating products.
- 6.6 No materials are to be applied at ambient air temperatures above 100° F.
- 6.7 No materials are to be applied at relative humidity levels above 88%.
- 6.8 Do not spray apply if the wind velocity exceeds 10 mph without taking precautions to eliminate over spray.
- 6.9 Take all necessary precautions to protect unrelated surfaces from coating over spray or spillage
- 6.10 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.
- 6.11 Reflectivity of coatings may be reduced if roof surface is not cleaned on a regularly scheduled basis.
- 6.12 Ponding water areas must be repaired prior to any coating application to allow water to drain off the roof.

CAUTION: Do not apply within two hours of sunset, rain, fog or freezing temperatures. Energy Seal Coatings must be completely dry before exposing to water or foot traffic. Keep Energy Seal 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.

Our suggested installation specifications are based on information from laboratory and field testing which we believe to be reliable and correct; however, accuracy and completeness of said tests are not guaranteed and not to be construed as a warranty, either expressed or implied. Since the use of the material is beyond manufacturer's control, buyer assumes all risk whatsoever as to their use or results obtained. We guarantee our products to conform to Advanced Coating Systems, Inc. quality control. Advanced Coating Systems, Inc. warrants only the standard quality of material. Manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proved to be defective.

