

## **ARS-1-RB50XT INSTALLATION GUIDE**

### **FULLY REINFORCED MEMBRANE SYSTEM**

#### **Roof Board**

### **1. DESCRIPTION**

The Acrymax<sup>®</sup> ARS-1-RB50XT System is a fluid applied reinforced elastomeric membrane system specifically designed for use over DensDeck<sup>®</sup> or other approved roof board. Combining multiple coats of Acrymax AF-130 Series Coatings with high strength polyester reinforcement the ARS-1-RB50XT system cures to a durable, weatherproof, fully reinforced, and fully adhered elastomeric membrane. The ARS-1-RB50XT System once applied provides the basis for a sustainable roof system that is easily maintained. It offers an environmentally responsible method for roofing and weatherproofing applications. The ARS-1-RB50XT system when applied properly will yield a membrane thickness of 50 mils as described herein.

### **2. MATERIALS**

The materials used in the ARS-1-RB50XT System may include but not be limited to:

- AF-130BC Basecoat
- AF-130XT High Strength Finish-coat
- Poly-1 Polyester Reinforcement Fabric
- Poly-6 Self-stick Reinforcement Tape
- AF-127 Sealer-Primer
- SP-315 Seam Sealer

### **3. APPLICATION EQUIPMENT**

Acrymax AF-130 roof coatings can be applied by brush, roller, or spray. Airless spray is the most efficient method of application where proper conditions and expertise exist. Spray equipment should be capable of 2500 – 3000 psi with output of 2 - 2.5 gallons per minute. A “Reverse-a-Clean” tip with tip size .027 to .041. Application by roller or brush may require additional coats to achieve uniform membrane

thickness, but material requirements will generally remain the same. Rollers should be medium or long nap. (3/4” recommended)

### **4. INSTALLATION**

Installation of the ARS-1-RB50XT System is accomplished in five (5) basic steps:

- a. Preparation & Repair
- b. Roof Board Installation
- c. Installation of Reinforcement
- d. Application of Elastomeric Finish Coats
- e. Inspection

#### **(a) Preparation & Repair**

Roof surfaces shall be clean, dry, and structurally sound. Acrymax fluid applied systems should not be applied over roofing, insulation, or related materials that are saturated with moisture. All necessary roof repairs must be done according to good construction practices. For applications over existing roof systems a complete inspection must be made, including core cuts, moisture detection scans or other suitable methods as necessary, to determine where excess moisture exists. Any wet insulation must be replaced with new materials of equal thickness. All loose gravel, dirt and debris shall be removed by vacuuming and/or power sweeping. On heavily graveled areas removal by spudding, scraping or scarifying may be necessary to smooth the surface prior to application of the roof board. If system is to be installed over single-ply membrane the membrane should be slit in multiple locations prior to installing roof board. Unsound areas shall be repaired or replaced as necessary. It is the applicators responsibility to insure a sound and suitable surface for application of the coating system.

## **(b) Roof Board Installation**

1. Attach roof board to roof using either mechanical fasteners or suitable adhesive. Mechanical attachment shall be done using fasteners that are appropriate for the substrate. Space fasteners as recommended by roof board manufacturer so that it is securely fastened to the deck. If using adhesive to secure the roof board to the substrate, utilize appropriate adhesive for the substrate to be covered. Roof deck areas shall have positive slope to drain. Use tapered insulation if necessary to provide positive slope. Add crickets if necessary.
2. Reinforce areas around drains, scuppers, flashings and protrusions by applying a heavy coat of AF-315 using a brush. Tops of fastener plates should be sealed with AF-315 if installation of the membrane system will not be started on the same day as installation of roof board.
3. Prime board with AF-127 as necessary. If DensDeck Prime is used a primer may not be necessary.
4. All seams between sheets of roof board must be reinforced using 3" Poly-6 self stick reinforcement centered over the seam.

## **(c) Installation of Reinforcement**

Before application of coatings verify that the surface to be coated is cleaned and prepared properly. At any time during application of the Acrymax system if roof surface becomes contaminated with dirt, dust or other materials that will interfere with adhesion of the coatings then cleaning measures must be taken to restore the surface to a suitable condition. Dust should be blown off of surfaces to be coated with compressed air or blowers immediately before application of coatings.

Entire surface of the installed roof board panels must be reinforced by embedding 40" wide rolls of Poly-1 Reinforcement Fabric into Acrymax AF-130BC Basecoat.

### **Field of Roof**

1. Determine where 1st run of Poly-1 reinforcement fabric will be started. Standard fabric width is 40". On sloped roof surfaces the 1st run of fabric should be run parallel to

the low edge of the roof. A chalk line can be used to guide the 1st run of fabric.

2. After positioning fabric to roll out, apply tack coat of Acrymax AF-130BC to surface where Poly-1 is going to be applied. Do not apply AF-130BC too far ahead of fabric or coating may dry before fabric can be embedded. The minimum application rate for the tack coat should be 1 to 1.5 gallons per 100 square feet. Immediately roll Poly-1 reinforcement into wet coating. Care should be taken to lay the fabric tight and contoured to the roof surface without air pockets, wrinkles, fishmouths, etc. A soft bristle push broom, squeegee, or brush can be used to smooth out the fabric.
3. After embedding Poly-1 Reinforcement into tack coat of AF-130BC, apply additional Acrymax AF-130BC to completely saturate the fabric at minimum application rate of 1.5 to 2 gallons per 100 square feet. This saturation coat should be applied as soon as possible after embedding Poly-1 into the tack coat. Allow to dry for a minimum of 24 hours before applying finish coats.
4. Total AF-130BC used to embed and saturate the Poly-1 should be a **minimum** of 3 gallons per 100 square feet.
5. Apply each successive run of reinforcement as per above while overlapping each run of the Poly-1 fabric a minimum of 3" using the overlap line imprinted on the fabric as a guide. On sloped roofs each subsequent run should be applied parallel to and up the slope of the previously applied fabric.
6. If necessary apply additional AF-130BC to achieve required membrane thickness.

### **Flashings, penetrations, transitions, and other detail areas requiring reinforcement**

1. Apply liberal tack coat of AF-130BC to area to be covered.
2. Embed appropriate width Poly-1 Reinforcement Fabric into this wet coating. Work the fabric into the wet coating using brush, roller, or soft broom so that the fabric is flush and tight to surface without wrinkles, air pockets, or fishmouths.
3. Apply additional Acrymax AF-130BC to completely saturate fabric. Total AF-130BC used to embed and saturate Poly-1 should be 3 gallons per 100 square feet.

Estimated Acrymax AF-130BC per 100 linear feet required to install Poly-1 Fabric Reinforcement:

Fabric Width	4"	6"	12"	18"	40"
Gallons	1.0	1.5	3.0	4.5	10.0

**Note:** The estimated material requirements are for coating materials that are required for the tack coat that is used to embed Poly-1 and for the saturating coat that is applied after reinforcement has been installed. Areas that are reinforced must be coated again with each subsequent application of coatings that are part of the system. Special attention should be given to insure complete and adequate coverage at these critical areas.

**(d) Application of Finish Coats**

Apply Acrymax AF-130XT Finish Coats (three coats minimum) to all areas previously reinforced. White is the suggested finish color for energy efficiency and reduced thermal stress on the roof.

1. Apply 1<sup>st</sup> coat of Acrymax AF-130XT in a uniform manner at *minimum* application rate of 1 gallon per 100 square feet. Allow to dry.
2. Apply 2<sup>nd</sup> coat of Acrymax AF-130XT in a uniform manner at *minimum* application rate of 1 gallon per 100 square feet. Allow to dry.
3. Apply 3<sup>rd</sup> coat of Acrymax AF-130XT in a uniform manner at *minimum* application rate of 1 gallon per 100 square feet.

**Notes:** Each coat should be applied in a perpendicular direction to the previous coat. During application of the coating system special attention should be given to flashings and any other critical areas so as to build required membrane thickness. When applied by roller additional coats may be necessary to achieve uniform film thickness. Total material requirements will stay the same. All specified material must be applied and minimum membrane thickness achieved.

**(e) Inspection**

Inspect entire roof area and touch-up deficient areas with additional Acrymax AF-130XT as necessary to insure complete and uniform

coverage. Special attention should be given to critical areas of roof, including roof penetrations, transitions, flashings, etc.

**5. LIMITATIONS**

These are general guidelines for application of the Acrymax ARS-1-RB50XT System. The material requirements may vary depending on the specific job requirements. If unusual conditions exist, contact Acrymax Technical Service at 610-566-7470. Acrymax Fluid Applied Elastomeric roofing systems must be applied to structurally sound substrates and properly prepared surfaces. All surfaces must be clean and dry before application of coatings. The suitability of Acrymax coatings or systems for an intended use shall be solely up to the user. Drying time and coverage are not guaranteed. Acrymax roofing systems must not be applied over wet insulation or related materials. Failure of the substrate does not constitute failure of the Acrymax coating or system. Acrymax systems are designed for use on well drained roofs, however, they are acceptable for use where poor drainage causes temporary ponding. Acrymax Coatings should not be applied when rain or freezing temperatures are expected before coating is dry.

**6. WARRANTY**

Acrymax offers limited material warranties for the ARS-1-RB50XT System when all materials are used in strict accordance with all of Acrymax’s written requirements and recommendations and required dry film thicknesses are achieved. Acrymax’s sole responsibility under this limited material warranty is for defective material and Acrymax’s obligation shall not exceed the purchase price of the Acrymax materials used or part thereof proven to be defective. Submittal of required documentation is required for warranty. Consult Acrymax for details. This warranty gives specific legal rights and you may have other legal rights that vary from state to state. No statement by anyone may supersede this limited material warranty, except when done in writing by Acrymax’s Technical Service Office in Media, PA. Specific jobs that meet certain requirements, are pre-approved by Acrymax, and are applied by an Acrymax approved

applicator may qualify for system warranties covering labor and material. (Consult Acrymax)

**NOTES:**

1. Acrymax coatings are waterborne. Consequently application of these materials must not be done when rain or other conditions such as fog or heavy dew are possible before coating can dry sufficiently to be resistant to these occurrences. Drying time is affected by numerous factors including temperature, direct sunlight, relative humidity, air movement, thickness and color of applied coating, etc... Under proper conditions dry times for coatings will be from 2 to 4 hours, but under adverse conditions dry times can range to 12 hours or more. Application should not be done when temperatures are below 45°F or expected to drop below freezing before coating is dry. Special attention should be given to the dew point temperature because when this temperature is reached and dew forms the drying process of the coatings will cease.
2. Surfaces must always be clean before application of AF-130 Coatings. Care must be taken to insure that on-site manufacturing emissions or extended time intervals after original cleaning do not interfere with any stage of the coating

applications. If either condition occurs then cleaning may be required again.

3. Adequate coating thickness is essential to performance. If the applicator is unfamiliar in gauging application rates, we suggest that a controllable area be measured and the specified material be applied. In all cases all minimum specified material must be applied and proper minimum dry film thicknesses must be achieved. Care must be taken to insure that all areas completed including all flashings, roof penetrations, etc. are coated sufficiently to insure a watertight seal.
4. Consult ACRYMAX TECHNOLOGIES if any deviations from published specifications are considered. Unapproved deviations from application guidelines and specified material requirements may seriously affect the coating system performance, and shall be undertaken at the specifier's, applicator's or building owner's own risk.
5. Applicator must comply with all applicable local, state, and federal regulations if lead based paint or other hazardous materials are encountered.
6. Roofing is hazardous work and coatings are very slippery when wet. Comply with fall protection rules and regulations.

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