

# **ARS-2C**

## **PARTIALLY REINFORCED ELASTOMERIC MEMBRANE SYSTEM for CONCRETE ROOFS**

### **APPLICATION GUIDE**

#### **1. DESCRIPTION**

The Acrymax ARS-2C Elastomeric Systems are partially reinforced fluid applied elastomeric roof systems for protection, maintenance and weatherproofing of concrete roofs. Acrymax AF-130 Elastomeric Coatings and Poly-1 Reinforcement are combined to provide weatherproof, monolithic roof coverings with superior weatherability and durability. The ARS-2C Systems once applied provide the basis for sustainable and easily maintainable systems. The long-term cost benefits offered by this state-of-the-art technology include lower life cycle costs and energy savings. Acrymax coatings are waterborne materials that are VOC compliant and exceed all regulatory requirements. They offer an environmentally responsible method for roofing and weatherproofing applications.

The ARS-2C Systems include the following:

System designation	Membrane thickness (mils) <i>un-reinforced areas</i>	Membrane thickness (mils) <i>reinforced areas</i>
ARS-2(C25)	25 average, 22 minimum	45 average, 42 minimum
ARS-2(C30XT)	30 average, 27 minimum	50 average, 47 minimum

#### **2. MATERIALS**

The materials used in the ARS-2C Systems may include AF-130BC Basecoat, AF-130 Finish-coat, AF-130XT High-strength Finish-coat, Poly-1 Polyester Reinforcement Fabric, AF-100 Acrylic Sealer-Primer, and AF-136 Patching Material.

#### **3. APPLICATION EQUIPMENT**

Acrymax AF-130 Coatings can be applied by brush, roller, or spray. Airless spray is the most efficient method of application where proper conditions and expertise exist. Suggested spray equipment should be capable of 2500 – 3000 psi with output of 2 - 2.5 gallons per minute. 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.

#### **4. INSTALLATION**

Installation of the ARS-2C Systems are accomplished in six (6) basic steps: (a) Preparation, (b) Repair, (c) Priming, (d) Application of Poly-1 Reinforcement with AF-130BC Basecoat, (e) Application of elastomeric membrane, and (f) Inspection

### ***(a) Preparation***

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Acrymax AF-130 coatings must have a clean surface to adhere to. Proper surface preparation is the key to successful applications. All dirt, debris, oils etc. must be removed by the most effective method possible. High-pressure water (2000 psi minimum) is the preferred method. Vacuuming, stiff brooming, and low-pressure water washing can also be used. When high-pressure water washing is used it should be done at a pressure suitable to remove embedded dirt and contaminants without damaging the substrate that is being cleaned and care must also be taken to make sure that water does not intrude into the building. Cleaner such as TSP (or biodegradable alternative) should be used as necessary. All residues must be thoroughly rinsed off.

A tape test should be used to determine acceptability of cleaned surface for coating application. This is done by applying masking tape to the surface to be coated, and then peeling off the tape. If the adhesive side of the tape shows contaminants that will interfere with the adhesion of the coatings, then further cleaning or use of a primer may be necessary.

### ***(b) Repair***

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All necessary repairs must be done according to good construction practices. Unsound areas including spalled or pitted areas must be repaired and made flush with the surrounding areas. If concrete is repaired it should be done using concrete that is modified with admixtures containing acrylic resins. Any concrete repairs must be allowed to cure before application of Acrymax coatings. Acrymax AF-130BC should be used with Poly-1 polyester reinforcement fabric in appropriate widths to repair and reinforce cracks and other defective areas in the existing roof surface. Acrymax AF-136 Patching Compound, Modified Concrete Patching Materials, or urethane sealant should be used to fill all cracks as necessary.

### ***(c) Priming***

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Concrete surfaces should be primed with AF-100 prior to application of Acrymax membrane. Primer application rates can vary depending on the porosity of the concrete. Application rates generally should be 250 square feet per gallon. Porous surfaces may require application at rate of 150 – 200 square feet per gallon. Previously painted or coated surfaces usually do not require primer.

### ***(d) Application of Poly-1 Reinforcement with AF-130BC Basecoat***

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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. All required materials must be applied and minimum dry film thickness achieved.

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

All flashings, penetrations, transitions, and other detail areas requiring reinforcement should be completed with Poly-1 and Acrymax AF-130BC in the following manner:

1. Apply heavy coat of AF-130BC to area to be covered.
2. Embed appropriate width Poly-1 polyester fabric into this wet coat of AF-130BC.  
Poly-1 Fabric is available in 4", 6", 12", 18", and 40" widths.
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 apply Poly-1 Fabric Reinforcement on seams or penetrations:

4" width 1.0 gallons	6" width 1.5 gallons	12" width 3.0 gallons	18" width 4.5 gallons
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**Note:** The estimated material requirements are for materials that are required to apply tack coat used to embed Poly-1 and to provide first saturating coat of Acrymax. During application of liquid applied elastomeric membrane the seams and detail areas that have been reinforced with Poly-1 must be thoroughly coated with Acrymax coatings to provide a completely weathertight seal. Special attention should be given to insure complete and adequate coverage at these critical areas.

### ***(e) Application of Elastomeric Membrane***

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Apply Acrymax Elastomeric Membrane using the appropriate AF-130 coatings in the color desired. Contrasting colors should be used for each coat. White is the suggested finish color for energy efficiency and reduced thermal stress on the roof. Dust should be blown off of surfaces to be coated with compressed air or blowers before application of coatings.

#### **ARS-2(C25)**

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1. **Basecoat** - Apply 1<sup>st</sup> coat of elastomeric coating using Acrymax AF-130BC applied in a uniform manner at minimum application rate of 1.5 gallons per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
2. **Finish Coat** - Apply 2<sup>nd</sup> coat of elastomeric coating using Acrymax AF-130 applied in a uniform manner at minimum application rate of 1.5 gallons per 100 square feet.

#### **ARS-2(C30XT)**

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1. **Basecoat** - Apply 1<sup>st</sup> coat of elastomeric coating using Acrymax AF-130BC applied in a uniform manner at minimum application rate of 1.25 gallons per 100 square feet per coat. Allow to dry a minimum of 2 to 4 hours.
2. **Intermediate Coat** - Apply 2<sup>nd</sup> coat of elastomeric coating using Acrymax AF-130 applied in a uniform manner at minimum application rate of 1.25 gallons per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
3. **Finish Coat** - Apply 3<sup>rd</sup> coat of elastomeric coating using Acrymax AF-130XT applied in a uniform manner at minimum application rate of 1.25 gallons per 100 square feet.

**Notes:** Each consecutive application of AF-130 coating should be applied in a perpendicular direction to the previous coat. During final application of the Acrymax finish coats special attention should be given to coating flashings and critical areas to build adequate membrane thickness. When applied by roller it can be difficult to get a uniform finish coating thickness. It can be best when applying by roller to apply additional coats to achieve uniform film thickness. Material requirements will stay the same.

### ***(f) Inspection***

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Inspect entire roof area and touch-up deficient areas with additional Acrymax AF-130 or AF-130XT as necessary to insure complete and uniform coverage. Special attention should be given to critical areas of roof, ie: details, roof penetrations, etc.

## **5. LIMITATIONS**

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These are general guidelines for application of the Acrymax ARS-2C Systems. 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. All surfaces must be clean and dry before application of roofing. 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, it is 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**

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Acrymax offers limited material warranties for the ARS-2C Systems 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 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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