

ARS-1C

REINFORCED ELASTOMERIC MEMBRANE SYSTEM **for CONCRETE ROOFS**

APPLICATION GUIDE

1. DESCRIPTION

The Acrymax ARS-1C Elastomeric Roof System is a fluid applied reinforced elastomeric membrane system for weatherproofing concrete roofs. Combining multiple coats of Acrymax AF-130 Series Coatings with high strength polyester reinforcement the ARS-1C system cures to a durable, weatherproof, fully reinforced, and fully adhered elastomeric membrane. The ARS-1C System once applied provides the basis for a sustainable roof system that is easily maintained. 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-1C system when applied properly will yield a *minimum* final membrane thickness of 40 mils and an average membrane thickness of 45 mils as described herein.

2. MATERIALS

The materials used in the ARS-1C System may include AF-130BC Basecoat, AF-130 Finish-coat, Poly-1 Polyester Reinforcement Fabric, and AF-100 Sealer-Primer.

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-1C System is 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 AF-130 Finish Coats, and (f) Inspection

(a) Preparation

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

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 all 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

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 do not generally require primer, but adhesion should be verified by applying test area.

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

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 before application of coatings. All required materials must be applied and minimum dry film thickness achieved.

Applying Poly-1 to field of surface to be covered

1. Determine where 1st run of POLY-1 fabric will be started. On sloped roof surfaces the 1st run of fabric should be run parallel to the low edge of the roof with subsequent runs applied using shingling method, overlapping the previous run a minimum of 3". A chalk line can be used to guide the 1st run while subsequent runs will be lined up with previous runs using the 3" overlap line that is imprinted on 40" Poly-1 fabric roll.
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 should be 1 to 1.5 gallons per 100 square feet. Immediately roll 40" width POLY-1 Polyester Reinforcement into wet coating. Care should be taken to lay the fabric tight to the roof surface without air pockets, wrinkles, fishmouths, etc. A soft bristle push broom 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 - 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 fabric as per above and overlapping each run of the Poly-1 fabric a minimum of 3". The Poly-1 Fabric is lined for this purpose.

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. Apply without wrinkles, air pockets, or fishmouths. 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 flashings, transitions, 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 watertight seal. Special attention should be given to insure complete and adequate coverage at these critical areas.

(e) Application of AF-130 Finish Coats

Apply Acrymax AF-130 Finish Coats (two coats minimum) 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.

1. Apply 1st coat of Acrymax AF-130 in a uniform manner at minimum application rate of 1 gallon per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
2. Apply 2nd coat of Acrymax AF-130 in a uniform manner at minimum application rate of 1 gallon per 100 square feet. The 2nd coat of Acrymax AF-130 should be applied in perpendicular direction to the 1st coat (*crosshatch method*).

Note: During final application of the Acrymax finish coats special attention should be given to coating flashings and other critical areas to build adequate membrane thickness. When applied by roller it may be difficult to get a uniform finish coating thickness. Sometimes it can be best when applying by roller to apply three (3) coats of the Acrymax AF-130 Finish Coat at the rate of approximately .75 gallons per 100 square feet. In any event all specified materials must be applied and minimum membrane thickness achieved.

(f) Inspection

Inspect entire roof area and touch-up deficient areas with additional Acrymax AF-130 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-1C 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, 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

Acrymax offers limited material warranties for the ARS-1C 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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