

ARS-2M

PARTIALLY REINFORCED ELASTOMERIC MEMBRANE SYSTEMS for METAL ROOFS

APPLICATION GUIDE

1. DESCRIPTION

The Acrymax ARS-2M Elastomeric Roof Systems are partially reinforced fluid applied elastomeric roof systems for protection and weatherproofing of existing metal 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-2 Systems once applied provide the basis for sustainable roof systems that are 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-2M Systems include the following:

System designation	Membrane thickness (mils) <i>un-reinforced areas</i>	Membrane thickness (mils) <i>reinforced areas</i>
ARS-2(M15)	15 average, 12 minimum	40 average, 37 minimum
ARS-2(M20)	20 average, 17 minimum	45 average, 42 minimum
ARS-2(M25XT)	25 average, 22 minimum	50 average, 47 minimum

2. MATERIALS

The materials used in the ARS-2M Systems may include AF-130BC Basecoat, AF-130 Finish-coat, AF-130XT High-strength Finish-coat, Poly-1 Polyester Reinforcement Fabric, PC-125 Rust Inhibitive Primer, and AF-131 Brushable Caulk.

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-2M Systems are accomplished in six (6) basic steps: (a) Preparation, (b) Repair, (c) Priming, (d) Treatment of seams, fasteners, and details, (e) Application of elastomeric membrane, (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 of all coating systems! All dirt, debris, oils, and contaminants that can interfere with adhesion of coatings must be removed by the most effective method possible. High pressure water is the preferred method when appropriate. Vacuuming, stiff brooming, and low pressure water washing also can 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. **It is very important to note that inadequate preparation of corroded metal surfaces can lead to premature failure of the coating system. Rust must be removed using the most rigorous method suitable for each particular job.** Jet water blasting, sand blasting, power wire brushing are effective. Coatings must not be applied over loose untreated rust. The STEEL STRUCTURES PAINTING COUNCIL (SSPC) establishes standards for different types of surface preparation. If rust cannot be removed then it should be converted with appropriate treatment prior to priming with rust inhibitive primer. A rust converter that has been found suitable for use with Acrymax systems is called OSPHO. Information on OSPHO can be found at ospho.com

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 including the replacement of all metal that is deemed unsalvageable or unsafe. All panel fasteners must be checked and any loose fasteners must be tightened or if necessary replaced with oversized fasteners.

(c) Priming

Rust must be removed by the most rigorous method suitable for the particular project. After rust has been removed surfaces should be primed with PC-125 Rust inhibitive primers applied immediately after cleaning to prevent rust from reoccurring. PC-125 Rust Inhibitive Primer should be applied at the rate of 1 gallon per 250 square feet. On roofs that exhibit minor or localized corrosion PC-125 can be used to spot prime these areas. On other roofs PC-125 may be required on the entire roof. PC-125 must only be used after proper and thorough preparation of the surface to be primed. Consult **Acrymax Technologies Technical Services Department** for complete information on treatment of rusted metal.

(d) Treatment of seams, fasteners, & details

Seams, flashings, penetrations, and other details should be reinforced as necessary. Apply Acrymax AF-130BC to the seam or other area to be reinforced and immediately embed polyester reinforcement of appropriate width into wet coating. Apply additional coating to the top of the fabric taking care to completely seal fabric. Embed appropriate width Poly-1 polyester fabric into this wet coat. Apply without wrinkles, air pockets, or fishmouths.

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.

Treatment of fasteners: Make sure all fasteners are properly tightened and washers are in place. Tighten all loose fasteners or replace with oversize fasteners as necessary. Missing fasteners must be replaced. Create a watertight seal on all fastener heads by applying a heavy dab of high-build AF-131 to the tops of all fastener heads. One gallon of AF-131 Flashing Grade will treat approximately 600 fastener heads. Alternatively, Acrymax fastener caps can be used.

(e) Application of Elastomeric Membrane

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.

When calculating material requirements for a particular project, consideration must be given to overspray and/or applicator inefficiencies. It is also important to recognize that corrugated metal roofs represent a larger surface area than would be encountered on a flat roof of similar dimensions. When calculating material requirements the particular corrugation pattern of the roof must be taken into consideration and the measured square footage increased accordingly.

ARS-2(M15)

1. **Base Coat** - Apply 1st coat of elastomeric coating using Acrymax AF-130BC applied in a uniform manner at the minimum application rate of 1.0 gallon per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
2. **Finish Coat** - Apply 2nd coat of elastomeric coating using Acrymax AF-130 applied in a uniform manner at the minimum application rate of 1.0 gallon per 100 square feet. Allow to dry.

ARS-2(M20)

1. **Base Coat** - Apply 1st coat of elastomeric coating using Acrymax AF-130BC applied in a uniform manner at the minimum application rate of 1.25 gallons per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
2. **Finish Coat** - Apply 2nd coat of elastomeric coating using Acrymax AF-130 applied in a uniform manner at the minimum application rate of 1.25 gallons per 100 square feet. Allow to dry.

ARS-2(M25XT)

1. **Basecoat** - Apply 1st coat of elastomeric coating using Acrymax AF-130BC applied in a uniform manner at the minimum application rate of 1.0 gallon per 100 square feet per coat. Allow to dry a minimum of 2 to 4 hours.
2. **Intermediate Coat** - Apply 2nd coat of elastomeric coating using Acrymax AF-130 applied in a uniform manner at the minimum application rate of 1.0 gallon per 100 square feet. Allow to dry a minimum of 2 to 4 hours.
3. **Finish Coat** - Apply 3rd coat of elastomeric coating using Acrymax AF-130XT applied in a uniform manner at the minimum application rate of 1.0 gallon per 100 square feet.

Notes: Each consecutive application of AF-130 coatings should be applied in a perpendicular direction to the previous coat. Contrasting colors should be used for each coat of AF-130 Coatings.

(f) Inspection

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: seams, fastener heads, roof penetrations, etc.

5. LIMITATIONS

These are general guidelines for application of the Acrymax ARS-2M 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 within 24 hours of application.

6. WARRANTY

Acrymax offers limited material warranties for the ARS-2M 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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