



HP-1 REINFORCED MEMBRANE SYSTEM

Installation Guidelines

DESCRIPTION

The HP-1 Reinforced Membrane System is a fluid applied reinforced membrane system specifically designed for weatherproofing existing historic metal or “tin” roofs. This system can also be used on existing asphalt roofs, concrete, plywood and other acceptable smooth-surfaced substrates. Combining multiple coats of Acrymax Elastomeric Coatings with high-strength polyester reinforcement the HP-1 system cures to a durable, weatherproof, fully reinforced, and fully adhered elastomeric membrane with superior durability and weatherability. This system is easily maintainable and can be recoated periodically to extend the life of the system. The HP-1 Specification will yield a final membrane thickness of 45 mils as described herein.

Acrymax coatings are waterborne materials that are safe and easy to apply. They provide an environmentally responsible method for roofing and weatherproofing applications.

APPLICATION EQUIPMENT

Acrymax coatings can be applied by brush, roller, or airless 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 .027 to .041 orifice size is recommended. Application by roller or brush may require additional coats to achieve uniform membrane thickness, but total material

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

INSTALLATION

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

1. Repair
2. Preparation and priming
3. Installation of Reinforcement
4. Application of Finish Coats
5. Inspection

1) Repair

Prior to application of the Acrymax HP-1 System all necessary substrate or structural repairs must be made. If any unusual conditions exist then Preservation Products should be consulted before proceeding with application of the HP-1 System. Good roofing and construction practices must always be used.

2) Preparation and priming

Acrymax coatings must have a clean surface to adhere to. Proper surface preparation is critically important for successful applications of all coating systems! All dirt, debris, oils, or other contaminants that can interfere with proper adhesion of coatings must be removed by the most effective method possible. High-pressure water is the recommended method when appropriate. Vacuuming, stiff brooming, wire-brushing, 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. Pressures of 2000-2500 psi are commonly used. Cleansers such as Trisodium Phosphate (TSP) or TSP substitutes that are suitable for paint preparation can be used as necessary. When cleansers are used make sure surfaces are thoroughly rinsed and no residue remains.

A tape test should be used to determine acceptability of the 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.

Priming is not a substitute for proper cleaning. Immediately prior to coating application dust that may collect on the roof surface should be blown off with blowers.

“Tin” or metal surfaces:

Any existing coatings on surfaces to be coated with Acrymax must be removed or if allowed to remain they must be firmly adhered and in good condition. **Rust and Corrosion:** It is very important to recognize 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 the particular job. Wire brushing or sanding or other suitable methods must be done as necessary. Coatings must not be applied over loose untreated rust. After rust has been removed surfaces should be primed with HP-7000 Rust Inhibitive primer applied immediately after cleaning to prevent rust from reoccurring. HP-7000 should be applied at the rate of 1 gallon per 200-250 square feet. On roofs that exhibit minor or localized corrosion HP-7000 can be used to spot prime these areas. On other roofs HP-7000 may be required on the entire roof. All bare metal surfaces should be primed with a HP-7000 prior to applying coating system. Primer should only be used after thorough preparation of the surface to be primed. If severe rust is present it may be appropriate to use a rust converter on the rusted areas prior to using rust inhibitive primer. Consult Preservation Products for complete information on treatment of rusted metal.

Existing asphalt roofs:

Power washing at 2000-2500 psi is the best method for removing oxidation and contaminants from existing asphalt roofs. A low pressure wash with stiff brooming can be done if power washing is not possible. If after washing the surface still has a chalky finish then Acrymax AF-127 Primer should be used. AF-127 is applied at the rate of 200 – 250 square feet per gallon.

Concrete surfaces:

New concrete must be allowed to cure for 30 days. Power wash to remove all contaminants. If necessary acid etch with muriatic acid as per manufacturers instructions. After cleaning, prime surface with Acrymax AF-100 applied at the rate of 200 – 300 square feet per gallon.

New Plywood:

All plywood decks must be 3/4” minimum thickness exterior grade. Space panels and securely fasten according to recommendations of the American Plywood Association. If appearance is important then any defects in the surface should be filled and sanded smooth. Suitable fillers include commercial floor levelers and other fillers suitable for use on plywood. Prime plywood with HP-1000 at rate of 1 gallon per 250 square feet. It is recommended that seams between sheets of plywood be treated by embedding 4” width Poly-1 reinforcement fabric into a wet coating of HP-1000, brushing the fabric smooth and flush to the surface, and then saturating with additional HP-1000 prior to applying HP-1 membrane. This will provide for double reinforcement at these critical areas.

Preparation of other surfaces:

Consult Preservation Products about preparation of other surfaces.

3) Installation of Reinforcement

Before application of coatings verify that the surface to be coated is clean and dry. Proper coating thickness is essential to performance. Inexperienced applicators should measure a small area (10 ft. x 10 ft.) and then apply the specified quantity of material.. This will enable the applicator to better gauge application rates. In any event all minimum specified material must be applied and proper membrane thickness achieved.

Standing Seam Metal Roofs On standing seam roofs 18” width Poly-1 is usually used to cover the pans of the roof or the area between the seams. After these areas have been completed the standing seams are then reinforced with 6” width Poly-1 extending this reinforcement onto the previously reinforced pans. Wider width reinforcement can be used, but care must be taken to make sure that the fabric conforms to the roof configuration including the standing seams. Each adjacent run of fabric should overlap a minimum of 2-3”.

Flat-locked “Tin” Roofs, Asphalt Roofs, Concrete, Plywood, and other smooth surfaces Poly-1 40” width fabric is the most commonly used reinforcement width. Other widths may be used where appropriate. Each adjacent run of fabric should be overlapped 3”.

1. After positioning fabric to roll out properly, apply tack coat of Acrymax HP-1000 to surface area where POLY-1 is going to be applied. HP-1000 should not be applied too far in advance of the fabric as it can dry before the fabric can be embedded. This is especially true on sunny or hot days. The minimum application rate for HP-1000 should 1.5 gallons per 100 square feet.
2. Immediately roll POLY-1 Reinforcement into wet coating. Care should be taken to lay the fabric tight to the roof surface avoiding wrinkles, fishmouths, etc. A soft brush or broom can be used to smooth out the fabric. HP-1000 should begin to seep through applied fabric if the tack coat has been applied properly.
3. After embedding Poly-1 Reinforcement into the tack coat of HP-1000 apply additional Acrymax HP-1000 to completely saturate fabric at minimum application rate of 1.5 to 2 gallons per 100 square feet. Allow to dry. (Total HP-1000 required to embed and saturate Poly-1 is 3 gallons per 100 sq.ft. minimum)

Flashings and transitions

All flashings and transitions should be completed with Poly-1 and Acrymax HP-1000 in the following manner:

1. Apply liberal coat of HP-1000 to area to be covered.
2. Embed appropriate width Poly-1 polyester fabric into this wet coat of HP-1000 making sure fabric conforms to surface and all edges are laid flat.
3. Apply additional Acrymax HP-1000 to completely saturate fabric.

Note: During final application of the Acrymax finish coats special attention should be given to coating these critical areas to build adequate membrane thickness and create a watertight seal.

4) Application of Finish Coats

Apply Acrymax HP-5000 Finish Coats in the color desired.

1. Apply 1st coat of Acrymax HP-5000 at minimum application rate of 1 gallon per 100 square feet.
2. Apply 2nd coat of Acrymax HP-5000 at minimum application rate of 1 gallon per 100 square feet.

Allow 2 to 4 hours minimum dry time between coats. HP-1000 can be substituted for HP-5000 when a high strength finish is **not** desired.

Note: When applied by roller it can be difficult to get a uniform finish coating thickness in two coats. It can be best to apply 3 finish coats when applying by roller. The application rate for each coat would be .7 gallons per 100 square feet. This is approximately 140 square feet per gallon per coat. Gutter areas or areas that may hold water should receive an additional finish coat to build additional thickness.

5) Inspection

Inspect entire roof or surface covered and apply additional Acrymax Coatings as necessary to insure complete and uniform coverage.

LIMITATIONS

These are general guidelines for application of the Acrymax HP-1 System. The material requirements and number of coats may vary depending on the specific job requirements. If unusual conditions exist, contact PRESERVATION PRODUCTS INC. at 610-565-5755. Acrymax Fluid Applied Elastomeric roofing systems must be applied to structurally sound substrates. All surfaces must be clean and dry before application of coating system. 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 or failure of any existing coatings left remaining on surface that is coated does not constitute failure of the Acrymax coating or system. The Acrymax HP-1 System is 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.

WARRANTY

Limited material warranties are available for the HP-1 System when all materials are used in strict accordance with all of Acrymax's and Preservation Products written requirements and recommendations. The sole responsibility

under this limited material warranty is for defective material and the only obligation shall be to either replace or refund the purchase price of the materials or part thereof proven to be defective. No statement by anyone may supersede this limited material warranty, except when done in writing by the Technical Service Office of Preservation Products in Media, PA.

SAFETY NOTES

1. Users should familiarize themselves with appropriate Material Safety Data Sheets (MSDS). MSDS should be available at all worksites where materials are being used.
2. Materials shall be applied in accordance with all applicable local, state, and federal regulations.
3. A respirator should be used when spraying Acrymax coatings to protect from overspray particles.
4. When applying reflective white coatings to a roof, sunglasses should be used to protect eyes from glare.
5. Handle on pails should only be used to carry pail when on ground or roof and should not be used to hoist pail from ground to roof.
6. Translucent light panels should be clearly marked and safely protected from foot traffic.
7. All work shall be performed in conformance with the safety procedures outlined in the current FALL PROTECTION GUIDE as published by the Occupational Safety and Health Administration (OSHA).
8. Care should be taken to avoid overhead powerlines and arcing potential.

9. Comply with all federal, state, and local regulations regarding lead based paint or other hazardous materials that may be encountered. Visit <http://www.epa.gov/lead> for information regarding lead paint that may be encountered during renovations.

GENERAL NOTES

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 1 to 2 hours, but under adverse conditions dry times can range from 8-12 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.

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