



# Elastomeric Reflective Coatings for Roofs APPLICATION HANDBOOK

**IMPORTANT NOTES** (Details and Information Subject to Change. Edition 2015)

When applying coatings over an existing roof under warranty, the building owner should check with the existing roof system manufacturer, as this coating application may void a warranty. **In all cases, the existing roof system must be in sound condition prior to coating. Abolin Co is not responsible for any defect(s) in the existing roof system. Abolin Co requires proper surface preparation of the existing roof system.** Blisters, splits and other surface defects should be repaired in accordance with the most relevant published repair technical manuals and/or internationally well accepted repairing protocols and standards for Low-Slope Roofing Systems guidelines prior to application of Abolin Co Coatings. The applicator has the sole responsibility in addressing deficiencies with the existing roof system, selection of appropriate products and the quality of application of the coating system. The information herein should not be considered all-inclusive and should always be accompanied by a review of the Abolin Co specifications and guidelines and good application practices.

Cool temperatures and high humidity retard curing. Do not apply Elastomeric Reflective Coatings if weather conditions will not permit complete cure. Abolin Co Coatings are NOT intended for use over graveled surfaces.

Abolin Co recommends ADHESION TESTS PRIOR TO COATING to ensure adhesion and compatibility between the coating and the substrate. Abolin Co also RECOMMENDS a two (2)-coat application and in some cases REQUIRES two (2) or even three (3)-coat application of the elastomeric reflective coatings. If finished coverage rates exceed 1 liter per square meter, minimum 2-coat applications are REQUIRED. Product blisters may occur if coatings are applied too thick in high temperatures.

The statements provided concerning the material shown are intended as a guide for material usage and are believed to be true and accurate at the time of printing.

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**The information herein should not be considered all-inclusive and should always be accompanied by a review of the Abolin Co specifications and guidelines and good application practices.**

This information herein is based upon data and knowledge considered to be true and accurate at the time of printing and is provided for the reader's consideration, investigation and verification.

No statement made by anyone may supersede this information, except when done in writing by Abolin Co.

Abolin Co does not warrant any results to be obtained. Statements concerning possible use of Abolin Co products are made without knowledge of your particular roof and such an application may not be fit for your particular purpose. Abolin Co **DISCLAIMS ALL WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE**, except written warranties attached to Abolin Co products and written warranties signed by an officer of Abolin Co.



Now that you've selected one of the best brands of Elastomeric Acrylic Coatings available today, please take the time to read through this application handbook carefully before beginning. The handbook is broken into sections that provide the basic steps for applying Abolin Co Elastomeric Reflective Coatings over various roofing substrates.

## GENERAL INFORMATION

### ABOUT ABOLIN CO

Abolin Co Elastomeric Reflective Coatings are an economical alternative to extend the life of an existing roof. Advances in polymer chemistry have resulted in elastomeric coatings that provide lasting restoration, retrofit, or repair. This "liquid applied membrane" completely bonds to the surface as it dries; yet remains "elastomeric". It stretches as the substrate moves and then returns to its original shape without deformation.

Abolin Co Elastomeric Reflective Coatings are lightweight, versatile and easy to repair. Abolin Co Elastomeric Reflective Coatings are manufactured with strict quality control: you can count on quality that's consistent batch to batch.

**Reflectivity** is the percentage of the sun's rays that are turned away from a roof and **emissivity** is the percentage of heat a roof lets out of a building. Abolin Co, Cool Barrier liquid applied elastomeric TOP COAT & FINISH PRODUCTS can reduce surface temperatures of roofs as well as reducing interior temperature. Abolin Co manufactures products for professional roofing and coating applicators. Abolin Co guarantees the quality of these products and makes recommendations for their use and proper application procedures. No responsibility, however, is implied or assumed by Abolin Co, for the design, positioning, application or functional interrelation of any building components. This is the responsibility of the architect, engineer, applicator and building owner.

Abolin Co makes reflective elastomeric coatings for applications over the following surfaces:

- Metal Roofs
- Industrial/Commercial
- Agricultural
- Mobile Home/Office
- BUR and Modified Bitumen Roofs
- New SPF (PUF) Roofs
- Masonry Walls

### SAFETY FIRST

Abolin Co Elastomeric Reflective Coatings are water based, virtually eliminating concerns about hazardous materials.

1. Product Technical Data Sheets (TDS) and Material Safety Data Sheets (MSDS) are available from the local distributor.
2. Remember, these are professional, commercial grade products. Always read labels and product information prior to use.
3. Always make sure any ladders being used are securely tied off and take the time to be aware of the surrounding area when on a roof. When near the edge of a roof, always work facing the edge, not with your back to it. Make sure airless sprayer hoses or cords are positioned to minimize the chance of tripping over them.
4. Never point a power washer or airless sprayer gun in the direction of a person. High pressure nozzles can cause injection wounds if held close to skin.

5. Follow OSHA recommendations. It is the responsibility of the applicator to comply with all local, state, federal building codes/regulations and OSHA safety regulations.
6. Do not use open flames to accelerate the drying of any products.
7. These products must air dry on their own.
8. Never work alone.
9. Abolin Co recommends that applicators wear UV-rated sunglasses when applying the finish coating in bright sunshine.
10. Always ensure and verify that protections are taken to prevent fumes from entering the building. This may consist of, but not be limited to, covering doors, openings, ventilation openings, air intakes and other penetrations into the building that would allow fumes into the building.
11. Apply only in well-ventilated areas. Do not breathe, or expose others to, vapors or spray mist. Avoid contact with eyes and skin. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. If sanding, wear a dust mask to avoid breathing of sanding dust.

### **CAUTION!**

COATED AREAS BECOME EXTREMELY SLIPPERY WHEN WET.

ALWAYS MAKE SURE ALL WORK ENVIRONMENTS COMPLY WITH OSHA STANDARDS.

### **MATERIAL STORAGE**

- Keep products away from all ignition sources (i.e., fire, sparks, and flames).
- Do not store any products in areas where temperatures will fall below 7°C. THE PRODUCTS MUST BE PROTECTED FROM FREEZING AT ALL TIMES.
- Always store materials in their original containers as labeled by the manufacturer in a secure area to prevent theft, damage, or vandalism. Follow manufacturer's directions for proper protection of materials prior to and during installation. Any containers missing proper manufacturer's identification are not acceptable. All materials at jobsite must have proper MSDS Sheets available at the site.
- Read all container labels for additional information. Keep all containers tightly closed when not in use.
- Dispose of materials and their containers in accordance with local, state, and federal government regulations.

### **GENERAL PRECAUTIONS**

1. Make sure all steps are followed for each product as published in this handbook, including power washing with a PROPER CLEANER where stated.
2. Care should be taken when pressure washing so as not to cause damage or entrap moisture in the existing roof system.
3. All substrates to receive coatings must be clean, dry, and free of dirt, oil, loose granules and any substance such as loose asphalt that will adversely affect adhesion or performance of the elastomeric reflective coatings. A spud bar works well to pry substances off, especially early in the day when the asphalt, etc. is colder. Do not apply any elastomeric reflective coating over damp or wet surfaces.
4. Do not apply Abolin Co Elastomeric Reflective Coatings over gravel surfaced or coal-tar-pitch roofs. "Spudded" surfaces are also not acceptable.
5. Do not apply Abolin Co Elastomeric Reflective Coatings over existing roof insulation or roofing membranes where moisture is trapped within the material. Coating over wet components will adversely affect the adhesion of the Abolin Co Elastomeric Reflective Coatings.
6. Do not apply Abolin Co Elastomeric Reflective Coatings over asphalt or asphalt products that have not aged for a minimum of 90 days. Coating over uncured asphalt products will cause staining and blistering of the Abolin Co Elastomeric Reflective Coatings.

7. **Ensure that the air space below the roofing system is properly ventilated. Poorly ventilated air spaces greatly increase the probability of condensation on the bottom of a metal roof panel or roof deck. In addition, fill any gaps in the insulation below the metal roof panels. Condensation occurs when warm moist air hits a cold surface.** Properly ventilating the space below the roof and ensuring that the insulation has no gaps helps to equalize the attic temperature and outdoor temperature.
8. Be careful when repairing and/or replacing fasteners on metal roofs. Make sure there are no wires, conduit, or piping that may be penetrated when working with fasteners.
9. Masking or covering to prevent over-spray or accidental coating is required to provide protection of skylights, HVAC units etc., and other areas not scheduled for coating. The applicator is responsible for any product spills, spray drift, or over spray. Consider rolling or brushing a 5 meters perimeter and then spray applying the remainder to reduce the chance of overspray on adjacent surfaces.
10. It is the applicator's sole and continuing responsibility to properly prepare and maintain the surface for the application of the product, including but not limited to closing off doors, openings, ventilation openings, air intakes and other penetrations into the building that would allow fumes into the building.
11. If a roof has skylights or transits, use reduced pressure and a wide fan spray when cleaning with a power washer as most fiberglass panels and other non-load bearing roof components do not have the strength to withstand high pressure cleaning.
12. Keep the lids on when not actively in use. Make sure all products are stored in their original containers in a cool (but not where cold temperatures could drop below 7°C), dry area. Do not let the coating products freeze.
13. **Do not apply the Abolin Co Elastomeric Reflective Coatings on roof surfaces that do not provide positive drainage.**

## GETTING STARTED

### General Tools & Equipment Needed:

Following is a list of power and/or hand tools and equipment that are typically needed to apply Abolin Co Elastomeric Reflective Coatings:

1. Protective eyewear and gloves
2. Ladders and safety equipment (warning flags/lines, tie-offs, etc.)
3. Pressure washer & hoses
4. Stiff bristle broom and scrub brush (wire brush for metal roofs)
5. Ratchet or screw gun with sockets to remove and replace fasteners on metal roofs
6. Airless sprayer – 2500 psi minimum, 4 liters per minute minimum material output recommended
7. Hoses & spray tip kits for sprayer
8. Open-end wrenches to tighten guns & hoses
9. Thick-napped paint covers, roller frames, and handles
10. Jiffy mixer or heavy duty drill and paddle to mix coatings prior to application
11. Electrical extension cords
12. Generator (optional)
13. Clean rags
14. Wet Mil Gauge

## IMPORTANT TIPS

1. Remember to check with the local building inspector for any required permits or general requirements necessary to be in compliance with current local building codes.
2. Always use wet film gauge to determine the proper mil thickness has been applied.

3. Refer to NRCA guidelines for tools and materials necessary to repair an existing roof prior to application of the coatings.
4. In all cases, the existing roofing system must be in sound condition. Abolin Co is NOT responsible for any defects in the existing roofing system. Abolin Co requires proper surface preparation of the existing roofing system. Abolin Co recommends repairs be made to correct any defects found in the existing roof system, in accordance with the published NRCA Repair Manual for Low-Slope Roofing Systems guidelines, prior to application of Abolin Co Elastomeric Reflective Coatings.
5. When applying coatings over an existing roof under warranty, the building owner should check with the existing roofing system manufacturer, as this coating application may void the warranty.
6. **Abolin Co recommends ADHESION TESTS prior to bidding the project to ensure adhesion and compatibility between the coating and the substrate.**
7. **Clean equipment while coating is still wet.** Thoroughly rinse all hoses and spray equipment at end of the day. Make sure all materials, debris, containers, etc. are removed from work area and properly disposed.

## WARRANTY PROGRAM

### Types of Warranties Available

5 yr Limited Material

10 yr Limited Material

The Warranties available are dependent on the existing roof surface covered, the products used, and the quantity of the coatings applied.

### 5 & 10 YEARS LIMITED MATERIAL WARRANTY

To qualify, application of Abolin Co Elastomeric Acrylic Coatings must meet the guidelines as published in this handbook. No fee or inspection is required and the applicator is not required to be a Abolin Co Warranty Eligible Applicator.

**LABOR WARRANTY:** To become a Warranty Eligible Applicator, contact your Abolin Co Territory Manager. For Warranty Applications, contact Abolin Co Officers, or your local Abolin Co Territory Manager.

## PRE-JOB PREPARATION GUIDELINES

### ESTIMATING GUIDELINES

1. Identify roof type to be coated, then review recommended product application guidelines and related Product Data Sheets.
2. Determine square meter length of all areas to receive coating. To ensure accurate values, it is always best to physically measure the roof areas to be coated rather than trusting the building owner to provide the correct square meter length. Refer to the coverage rates listed in the Warranty Selection Chart and calculate quantities of each required product.
3. If any rooftop monitors, HVAC equipment and ductwork are to be coated (optional), these items must be considered as maintenance items only – they are not part of any warranted roof coating system.
4. For Metal Roof Coating Systems:
  - a. Always add 20% to the total roof area to compensate for panel profile.
  - b. Examine the roof for areas of heavy rusting and determine the areas. Additional coats of primer may be required in heavily rusted areas.
  - c. Determine number of fasteners requiring actual replacement.
  - d. Field fastener coverage – estimate approximately 4 liters of flashing grade products per 300-400 fastener heads.
  - e. Seams & End Lap Joints – estimate flashing grade product of 4 lit per 30 meter.

5. Contact Abolin Co Technical Department for information relating to any additional system requirements prior to the start of the project.
6. Include warranty fees (when applicable).
7. Include appropriate tax & freight charges.
8. Application labor can only be determined by the coating applicator.
9. Direct labor costs will vary according to:
  - a. Access to work area, product handling at work area
  - f. Condition of existing roof
  - g. Application technique (brush, roller or spray)
  - h. Spray equipment capacity (Liters per minute)
  - i. Screening, masking requirements
  - j. Packaging
  - k. Weather conditions
  - l. Crew size and experience

## INSPECTING THE ROOF

Inspecting the existing roof is critical to ensure watertight integrity after application of the coating system. During the inspection, look for deficiencies and damage that need to be repaired or replaced before installing Abolin Co Elastomeric Reflective Coatings. The following are some common deficiencies to look for on various roofing systems:

### METAL ROOFING SYSTEMS

- Loose and missing fasteners
- Peeling and chalking of previous coatings
- Poorly attached vents
- Open seams and side laps
- Loose or cracked perimeter edge flashing
- Broken or improperly flashed soil pipes
- Ponding water stains - areas of dirt/debris accumulation
- Excessive rusting and holes in the metal
- Sufficient slope/deflected panels
- Suggested references:
  - Manual for Inspection and Maintenance of Steep-slope Architectural Metal Panel Roof Assemblies: A Guide for Building Owners (NRCA)
  - Manual for Inspection and Maintenance of Low-slope Structural Metal Panel Roof Assemblies: A Guide for Building Owners (NRCA)

### BUR / MODIFIED BITUMEN ROOFING SYSTEMS

- Blisters, ridges, and splits
- Erosion of exposed felts
- Open seams (fish mouths) and end laps
- Cracked and wrinkled flashings
- Peeling/heavily oxidized aluminized coating
- Ponding water stains - areas of dirt/debris accumulation
- Sufficient slope

- Suggested references:
  - Repair Manual for Low-slope Membrane Roof Systems (NRCA)
  - Manual for Inspection and Maintenance of Built-up and Modified Bitumen Roof Systems: A Guide for Building Owners (NRCA)

## SINGLE PLY ROOFING SYSTEMS

- Open seams (voids)
- Poorly adhered field and flashing membrane
- Cracked flashings
- Open flashing terminations
- Missing perimeter attachment
- Ponding water stains - areas of dirt/debris accumulation
- Sufficient slope
- Suggested references:
  - Repair Manual for Low-slope Membrane Roof Systems SPRI/NRCA Manual of Roof Inspection, Maintenance and Emergency Repair for Existing Single-ply Roof Systems

### 1. Create an Inspection Summary Sheet for recording inspection findings and general details:

- Measure and note the dimensions.
- Note type of materials on existing roof – metal, BUR, MOD BIT, EPDM, Hypalon, Aluminum Coatings, etc.
- Note age of roof and age of any existing materials used for repairs, etc.
- Describe roof design – low-slope, metal panels, valleys, parapets, adjoining roofs, etc.
- Determine and note surface conditions and leak areas including the cause and severity.
- Determine size and materials needed to replace any wet damaged areas or materials needed for repairs.
- Survey building owner to identify conditions that occur prior to leaks such as driving rain, high winds versus continual leakage.
- Note newer penetrations or additions such as skylights, vents, etc.
- Abolin Co strongly recommends taking photos of the roof and any interior damage to the structure for documentation prior to the start of work.
- Check all parapet walls and copings for possible water entry
- Check walls that the roof abuts for general condition and possible water entry
- Check for adequate slope and positive drainage. Abolin Co strongly recommends using a 4' level set on the roof surface to determine slope. Building code requires ¼" per foot slope on new buildings
- Look for signs of ponding water and other indicators of insufficient slope and drainage

### 2. Create a Checklist to ensure a thorough evaluation:

#### General Conditions

- Blisters
- Buckling
- Corrosion
- Cracking
- Alligatoring
- Debris
- Discoloration
- Fastener Seals
- Fasteners to be replaced
- Old Coatings – Condition
- Open joints

- Open seams
- Physical damage
- Ponding water – location, size, depth
- Punctures
- Soft Areas
- Fasteners – loose
- Moss or other vegetation

#### Flashings

- Corrosion
- Sagging

- Cracked Sealant
- Damaged Edges
- Supports Deformed Metal
- Coping/Flashings
- Damaged Gravel Stop
- Loose/Missing Fasteners
- Loose or Missing Metal Sections
- Missing Covers
- Open End Joints

#### **Parapets, Sidewalls**

- Cracked Sealant
- Crickets
- Damaged Material
- Grouting
- Loose/Missing Metal
- Loose or Missing Caps
- Vertical Laps
- Wrinkles

#### **Drains**

- Debris Free
- Down Spouts
- Flashings
- Gutters
- Strainers/Clamping Rings

#### **Penetrations**

- Access Panels
- Chimneys
- Conduit/Pipes
- Draw Bands
- Firewalls
- Guy Wires
- HVAC
- Side Walls, Parapets
- Skylights
- Supports
- Vents/Breathers

#### **Adhesion Test**

Yes / No

- Pass
- Fail

#### **Slope / Drainage**

Slope \_\_\_" per meter

- Positive Drainage
- Ponding <48 hours
- Ponding >48hours

## Roof Type

- Bare Metal
- Aluminum
- Galvanized
- Galvalume
- Painted/Coated Steel
- Copper
- Lead Coated Copper
- New Smooth BUR-less than 5 yrs (# days cured\_\_)
- Smooth Mod Bit (age\_\_)
- Smooth Mod Bit (age\_\_)
- Granulated Mod Bit Cap Sheet (age\_\_\_\_\_)
- Mineral Surface BUR Cap Sheet (age\_\_\_\_\_)
- Aged Smooth BUR-over 5 yrs (age\_\_\_\_\_)
- EPDM
- Aged Hypalon-over 5 yrs (age\_\_)
- New SPF/PUF (# days cured \_\_\_\_\_)
- Masonry Wall (age\_\_\_\_\_)
- Skylights (age\_\_)
- Aged TPO-over 4 yrs (age\_\_\_\_\_)

If metal is painted/coated or if other roof type has existing coatings – if possible, determine the type of paint/coating.

**Note:** Abolin Co Elastomeric Reflective Coatings will not adhere to silicone coatings or silicone caulking.

**Note:** Adhesion testing is recommended for all surfaces.

## ADHESION TEST INSTRUCTIONS

Prior to bidding a project, Abolin Co strongly recommends testing for adhesion to existing roof surfaces if the finish/coating is not known. Some metal finishes and some coatings such as silicone are surfaces to which the acrylic elastomeric products do not adhere well. When the surface material is not known, Abolin Co recommends performing an adhesion test to determine if the elastomeric reflective products can adhere sufficiently to the cleaned existing surface. The product having direct contact should be the product used primary in the adhesion test. For example: If the surface is a painted metal and the primer is to be applied first, then the primer should be the product used to perform the first adhesion test. If the intent is to just recoat the surface with one of the Abolin Co TOP COAT & FINISH coatings then that coating should be used for the adhesion test. **The rule of thumb is “when in doubt, perform an adhesion test.”**

**Note:** Some new metal roof surfaces could have protective oil on the surface and may require an aggressive cleaner.

1. Clean a small area of the roof surface the same way that the complete roof will be cleaned
2. Apply one coat of the coating product in an area approximately 5 centimeters wide by 12 centimeters long.
3. Immediately embed a one 2, 5 centimeter wide by 15 centimeter long strip of cloth fabric into the new coating.

4. Allow about 5 centimeters of the fabric to protrude out of the coating on one end.
  5. After positioning the fabric, apply a second coat to seal over the fabric, but leave the protruding 5 centimeters uncoated.
  5. Allow the coating to cure for at least 72 hrs for basic adhesion test before attempting to remove the fabric.
  7. Peel the fabric straight up and observe the coating.
- If the coating peels off the roof surface with little to no effort, it is doubtful that the coating will adhere properly.
  - If there is difficulty in lifting the fabric, or the fabric separates from the new coating (leaving the new coating bonded to the existing coating), the odds are in favor of the new coating adhering sufficiently to the existing surface.
  - If coating over an existing aluminized coating and the coating peels off of the surface with little to no effort but there is aluminized coating on the back of the sample, the coating adheres well but the substrate is in poor condition.

**Note:** When in doubt as to the outcome of an adhesion test, contact Abolin Co experts to review test results.

**8. Abolin Co recommends performing an adhesion test on all surfaces prior to bidding**

#### PERCENT SOLIDS - WET FILM-DRY FILM CHART

WET FILM (thickness) using “Wet Film Gauge” will translate into APPROXIMATE DRY FILM (thickness) as shown below.

Liters PER SQM	WET FILM MILS	% VOLUME SOLIDS (Appr.)	APPROXIMATE DRY FILM MILS
0,8 lit	35	60	20
Cool Barrier Roof			
0,15 lit	4	50	2
Cool Barrier Protecta Clear			
0,2 lit	4	50	2
Epoxy Hydro Primer			

#### CHECKING MIL THICKNESS

**Use a Wet Film Gauge that is easy to use and gauge applied coating thickness from 1 to 80 mils.**

1. Pick one of the four sides of the gauge (selecting the side with the desired mil thickness) and place it vertically on the roof into the wet coating.
2. Lift up the gauge and look at the bottom notches. The notch showing wet coating that is also located just before the notch without wet coating will be the correct wet film thickness reading.
3. If all the notches have wet coating, wipe off the gauge and turn the gauge to the next higher mil side.
4. When finished, thoroughly wipe off the gauge, then store for your next wet film reading.

The “Percent Solids-Wet Mil-Dry Mil Chart” is an example how to verify application rates either during installation using the Wet Film Gauge or after installation using a Dry Film Thickness Gauge. To ensure proper application rates follow these instructions:

#### **During Application – using Wet Film Gauge**

Review application specifications to determine required application rate per coat.

**Note:** On non-magnetic surfaces, the only non-destructive way to check coverage rates is by using the Wet Film Gauge during application of each coat.

#### **After Application – using Dry Film Gauge**

1. Review application specifications to determine required application rate for all coats including primers and finish coats (gallons per 100 square feet).
2. Refer to far left column in “Percent Solids – Wet Mil – Dry Mil Chart” and find specified application rate for each coat. If more finish coats are required, add coverage rates of each coat together.
3. Refer to Product Data Sheet and Physical Properties Chart to determine Percent Solids by Volume.
4. Add dry film thicknesses for primer and finish coats together to get total dry film thickness needed to meet specified application rates.
5. Use Dry Film Gauge to measure thicknesses of coating system.
6. Take multiple readings throughout the roof to create an average value.

**Note:** Dry Film Thickness Gauges only work on magnetic surfaces.

#### **COVERAGE RATES DISCLAIMER**

Published coverage rates are based upon applying the products on clean, smooth, non-porous surfaces. Actual coverage rates may vary due to substrate conditions (deck profiles or surface texture), spillage, overspray, unused material left in opened containers and even the type of roller or brush used. To minimize this potential problem, an area should be laid out and coated at the recommended coverage rate using the intended equipment and checked when cured for actual dry film thickness (DFT).

### **PRODUCT INFORMATION**

#### **CLEANERS AND PRIMERS**

##### **CLEANER**

**Cool Barrier Rinseable Primer** is Condensed, multipurpose, waterbased alkaline cleaner, without aggressive vapors. The product possesses a remarkable efficiency and high wetting potency. It is suitable for all kinds of surfaces. It can be used for the cleaning of buildings’ external surfaces from soot, smoke and gases. The product can be diluted with water up to 100 times.

##### **Uses**

Although mostly used on decks, has numerous applications, including, pvc, asphalt and epdm roofing membranes, engine room and engine cleaning, Ro/Ro and ferries car deck bulkhead cleaning, fishing vessel holds, cargo holds and tanks cleaning, general ship, yacht and pressure boat exterior cleaning. Cool Barrier Rinseable Primer may be used for different types of cleaning and in a number of ways. Apply a solution of Cool Barrier Rinseable Primer (5-20%) in warm water on soiled surfaces using brushes, rags or hand spray. Allow 5-10 minutes for the product to act and rinse off with plenty of water. Where soiling persists, the product may be applied undiluted provided that all necessary precautions have been taken. If high pressure washing is used, use a solution of 1-20% Cool Barrier Rinseable Primer in warm water.

### **Caution**

Cool Barrier Rinseable Primer has a pH around 11. WEAR PROTECTIVE CLOTHING, GLOVES AND CHEMICAL SPLASH GOGGLES when applying Cool Barrier Rinseable Primer. As with all chemicals, use caution and good industrial hygiene when handling and disposing of empty Cool Barrier Rinseable Primer containers and ensure proper drainage for Cool Barrier Rinseable Primer and rinse water run-off from the roof. Thorough rinsing sufficiently dilutes the Cool Barrier Rinseable Primer rinse water can be safely discharged onto the ground surface. Never discharge Cool Barrier Rinseable Primer (nor the rinse water generated) directly into any open body of water. If in doubt, always contact the local authorities prior to discharging to the soil surface.

## **EPOXY HYDROPRIMER FOR METAL**

### **Product Description**

General purpose waterborne anticorrosive epoxy in protective coating systems for steel structures in atmospheric exposure.

### **Uses**

Primary use of this product is as a primer in the waterproofing and rust proofing of metal roof panels. Abolin Co Epoxy Hydroprimer for metal is designed to provide excellent adhesion to problem metal surfaces while it encapsulates rust. Low free-amine content, significantly reducing the health risk to production workers and craftsmen. The equipment can be cleaned with water instead of the solvent required in the case of conventional coating systems.

## **HYDRODUR V200 EPOXY PRIMER**

### **Product Description**

General purpose waterborne epoxy primer in protective coating systems for concrete structures and other surfaces in atmospheric exposure.

### **Uses**

Primary use of this product is as a primer in the sealing and waterproofing in concrete works. Abolin Co Hydrodur V200 can be used in specific roofing surfaces areas also during priming, repairing and maintenance works and to provide excellent adhesion to final coating elastomeric systems. The equipment can be cleaned with water instead of the solvent required in the case of conventional coating systems.

## **TOP COAT & FINISH COATS**

### **COOL BARRIER ROOF**

### **Product Description**

COOL BARRIER ROOF is an acrylic based elastomeric reflective coating. It exhibits exceptional exterior durability and UV stability, superior flexibility in low temperature environments and high reflectivity. The primary use of this product is the final top coating and/or the final finish coating (base and final coat) of new or existing roofs. This product may also be used as a maintenance coating to coat and protect surfaces, such as, aged (over 5 years) smooth BUR, aged Hypalon and EPDM. COOL BARRIER ROOF is available in 10 and 18 liters pails, and 1000 liters IBC's. COOL BARRIER ROOF is available in special order colors (minimum quantities required). Contact Abolin Co for current color selection and availability. However, white is recommended for maximum UV protection and energy savings. COOL BARRIER ROOF follows the basic requirements set within ASTM D6083.

### **Uses**

COOL BARRIER ROOF may be easily applied to various substrates including metal roofs, in combination with an appropriate primer and a flashing grade sealant.

## COOL BARRIER PROTECTA CLEAR Finish Coat

### Product Description

COOL BARRIER PROTECTA CLEAR Finish Coat is a polyurethane waterbased elastomeric coating designed to increase resistance to moisture, UV rays and high humidity. It exhibits exceptional exterior durability and UV stability, superior flexibility in low temperature environments.

### Uses

COOL BARRIER PROTECTA CLEAR is designed to be easily applied by spray, roller or brush application.

## INTERMEDIATE PRODUCTS- Accessories FLASHING GRADE (T250 MR PLUS COOL BARRIER ROOF)

### Product Description

A Special Flashing Product can be obtained with the use of T250 MR in a mix with COOL BARRIER ROOF elastomeric Top Coat. T250 MR is an already mixed clear solution of hydroxyethylcellulose in water and propylene glycol medium, designed to convert standard COOL BARRIER ROOF Top Coat into a thick, lashing /caulking grade sealant. The resultant flashing grade product has excellent physical properties and a smooth, buttery consistency. T250 MR can be used on the job site to permanently transform COOL BARRIER ROOF into a flashing grade sealant in seconds. T250 MR is available in 1 liter container.

### Instructions

Shake well before using. One 1 liter container of T250 MR will convert one 10 liter pail of COOL BARRIER ROOF into a thick, flashing grade sealant. Gradually empty and thoroughly mix\* one 1 liter of T250 MR into a 10 liter pail of COOL BARRIER ROOF. Continue mixing until the thickened product has consistency throughout. \*A 400-600 rpm 1/2" electric drill with a rectangular plaster paddle is required.

## APPLICATION GUIDELINES GENERAL APPLICATION GUIDELINES

1. Application may be by brush, roller, or airless sprayer:
  - a. Brush – suitable for small areas and flashings. Use a synthetic bristle paintbrush.
  - b. Roller – suitable for smaller areas. Use a medium to long nap roller cover.
  - c. Airless Spray Equipment – Refer to Recommended Airless Spray Equipment Guide
2. The existing roof system must be in sound condition.
3. Long-term performance of any roofing system may be affected by periodic ponded water. Periodic ponded water is a condition where water remains on the roof for no more than 48 hours after a rain. Ponded water areas should be corrected to provide positive drainage prior to applying Abolin Co elastomeric reflective coatings.
  - a. Areas where periodic ponded water occurs (Not exceeding 48 hours) may be addressed by applying **COOL BARRIER PROTECTA CLEAR**. COOL BARRIER PROTECTA CLEAR is formulated to improve resistance to damage caused by periodic ponding. However, COOL BARRIER PROTECTA CLEAR is not intended as a “cure all” for ponded water situations and prolonged exposure to moisture in ponded areas may be detrimental to COOL BARRIER PROTECTA CLEAR.
  - b. Areas where ponded water remains for more than 48 hours may require the installation of new drains to provide proper drainage or tapered insulation and new, compatible roofing materials to create positive drainage to the existing drain system. NRCA guidelines for ponding water state, “If the ponding condition cannot be eliminated, perform more frequent inspections to monitor and maintain the membrane surface affected by the ponding condition. Implement permanent solutions at the time of reroofing.”
  - c. **ABOLIN CO WARRANTIES WILL NOT BE VALID IF PONDING WATER REMAINING LONGER THAN 48 HOURS EXISTS ON THE ROOF.**

4. Abolin Co strongly recommends adhesion tests to be conducted on any unknown surfaces where adhesion may be questionable. It is the responsibility of the applicator to perform any adhesion tests prior to bidding the project. Refer to Adhesion and Compatibility Test Instructions in this handbook.
5. **Check weather conditions prior to start of work.** Abolin Co Elastomeric Reflective Coatings require complete evaporation of water to cure. Cool temperatures and high humidity retard cure. Do not apply if weather conditions will not permit complete cure before rain, dew or freezing temperatures. If dew point limits application window, mops or leaf blowers can be used to dry roof prior to coating. Do not spray in windy conditions without taking appropriate precautions to eliminate overspray.
6. **Temperature of surfaces to be coated should be above 7°C and below 40°C.** Do not apply coating if there is a chance temperature may drop below 45 degrees within 48 hours after application.  
**For applications in higher temperatures (above 30° C),** Abolin Co recommends application in multiple, thin coats to prevent rapid skinning and trapped moisture problems.
7. **Do not spray coatings when winds are 25 Km/h or faster.** Windbreaks, additional masking, and clearing of adjacent areas to protect from overspray are strongly recommended if the contractor elects to spray coatings when the winds are faster than 25 Km/h.
8. **Abolin Co recommends a minimum of 12 hours cure time between coats** or the product should be sufficiently dry that foot traffic will not damage the coating. Multiple coats should always be applied within 72 hours of each coat to minimize or prevent contamination that would require additional cleaning.
9. **Anticipate longer cure time when working in weather below 10 °C** since cleaners and coatings will not dry as quickly as in warmer temperatures with the sun shining.
10. **Inspect applied product after each application step** to ensure proper application techniques and compliance with coverage rate minimums.
11. All surfaces (roof, parapet, monitor and equipment) to be coated must be thoroughly cleaned with a pressure washer.

## **SURFACE PREPARATION – GENERAL**

1. Surface preparation of the various existing surfaces such as, metal roof panels, asphalt based roof membranes, single-ply membranes and other coatings, before application is one of the key elements to having a successful coatings installation. If the roof coating does not bond properly to the prepared surface, the coating may not perform as expected.
2. Pressure washing is typically recommended as a method to clean existing roof surfaces. It is the contractor's responsibility to ensure that no damage is caused to the existing roof surface when pressure washing. Utilizing too high a pressure could cause irreparable damage to seams, joints, flashings and membranes. Water could be forced into the roof system requiring wet areas to be completely removed. Surface preparation may require scrubbing with a stiff bristle brush and a good cleaning detergent.
3. The existing roofing system must be in a sound, watertight condition with good positive drainage. Areas exhibiting ponding and poor drainage must be corrected prior to applying the acrylic coatings.
4. Coating over existing aluminum coating requires the application of either Abolin Co waterbased epoxy primers or Abolin Co Solvent Based Primer. Power wash the existing roof surface to remove all loose and flaking aluminized coating. High pressure power washing may not be adequate to remove all loose and flaking aluminized coating. It may be necessary to brush the coating with a stiff bristle broom to remove any remaining loose and flaking coating. After brushing, power wash again. After the roof has thoroughly dried, apply the waterbased epoxy primer in one coat. Depending on the roughness of the substrate a second coat may be necessary. Allow the waterbased epoxy primer to dry a minimum of 48 hours before applying the acrylic coating. The Epoxy Hydroprimer must be thoroughly dry and firm enough to take foot traffic without damage prior to being coated. Drying time will be longer, 3 to 7 days, in cool and/or damp weather. Test for dryness in slowest drying areas by rubbing surface with a wet finger. Waterbased epoxy primer is dry if no staining occurs on your finger and the waterbased epoxy primer does not distort under pressure.

### **Elastomeric Acrylic Coatings System Application Disclaimer:**

Products not supplied by Abolin Co will not be covered under an Abolin Co warranty.

## **APPLICATION-SPECIFIC GUIDELINES**

### **METAL ROOF COATING SYSTEM**

#### **Step 1. Surface Preparation**

Cool Barrier Rinseable Primer OR other CLEANER specified by the contractor and approved by the building Owner is used as a general purpose cleaner prior to coating metal roofs with Abolin Co Elastomeric Reflective Coatings. All loose existing coatings, heavy rust, debris, and fresh roof cement must first be removed. It may be necessary to add a fungicide to remove heavy accumulations of fungi and algae. Notify building owner to be prepared for the possibility of some water entering the building during the power washing process.

Avoid spraying directly into seams or open penetrations.

- Power wash at minimum 2000 psi with full strength Cool Barrier Rinseable Primer (diluted properly) or other CLEANER at a rate of app. 1 liter per 10 sqm.
- Rinse roof thoroughly with water.

This effectively will remove existing oil, dirt, or grease that would adversely affect the bonding of acrylic coatings. Excessively soiled / greasy surfaces and rust or scale may require additional cleaning or scrubbing with a wire brush.

**Repair existing roof system in accordance with either the published NRCA Manual for Inspection and Maintenance of Steep-slope Architectural Metal Panel Roof Assemblies or the Manual for Inspection and Maintenance of Low-slope Structural Metal Panel Roof Assemblies. Replace missing or loose fasteners and metal panels as needed. To prevent re-oxidation of rusty areas, be sure to apply Abolin Co Epoxy Hydroprimer within 2 weeks of power washing roof.**

#### **Repair Tips**

- Stripped, loose or missing fasteners should be replaced with the next larger diameter fastener size (see Step 2 for priming directions when replacing fasteners). Check all fasteners to ensure they are tight.
- Add additional fasteners to tighten laps where gaps exist. Gaps should not exceed ¼ inch in width.
- Unsound rust should be scraped, wire brushed or sand blasted to remove all loose rust
- Panels that are rusted to the point where their structural integrity may be compromised should be replaced with new panels to match the existing.
- Damaged panels should be replaced. New metal must be clean and oil free. Bare or rusted metal must be primed with Abolin Co Epoxy Hydroprimer.
- Remove all asphaltic-based patching and flashing materials. Do not apply solvents to remove asphaltic-based materials. Remove asphalt coating with power washing, scraping or brushing.
- Remove all silicone caulks and sealants. Acrylic coatings, primers and flashing grade products will not bond to silicone caulks, sealants or coatings.
- Remove and replace deteriorated pipe boots and other flexible flashing materials.

**Note:** All metal surfaces to receive the Abolin Co Elastomeric Reflective Coatings must be thoroughly cleaned and dry prior to application. Abolin Co recommends cleaning with a pressure washer at a minimum application rate of the CLEANER at 1 liter per 10 sqm. Always thoroughly rinse with clean water and allow drying completely.

## Step 2. EPOXY HYDROPRIMER FOR METAL ROOF

EPOXY HYDROPRIMER for Metal is an anticorrosive coating. Improves adhesion of Top & finish coating over:

- Steel
- Aluminum
- Galvanized Steel
- Galvalume
- Copper
- Lead Coated Copper

EPOXY HYDROPRIMER for Metal encapsulates rust and inhibits development of new rust on ferrous surfaces. Apply by brush, roller, or airless sprayer.

- Cover and mask surfaces not to be coated.
- Re-tighten or replace loose fasteners. Replaced fasteners require spot priming of the metal surface with EPOXY HYDROPRIMER for Metal prior to fastener replacement.
- Foam inserts or backer rods are often in place along the ridge cap.
- If backer rod is present and in good condition, repairs may not be necessary. If inserts are deteriorated, remove and replace prior to coating. Note: If an open ridge cap is the primary ventilation system, consult with building owner about proper vents prior to performing any repair and/or coating work.
- Commencement of work by the applicator implies applicator's approval of the deck surface. EPOXY HYDROPRIMER for Metal at a rate of 1 liter per 5 square meters (4 wet mils).
- Medium to heavy rusted areas may require additional coats. (Applying EPOXY HYDROPRIMER for Metal at higher coverage rates in one coat can result in surface splitting and blistering due to trapped moisture). Estimate and control exact needed quantities of EPOXY HYDROPRIMER for Metal, before applying any other coating product, by performing proper adhesion tests and rust encapsulation verification.

## Step 3. FLASHING GRADE / DETAILING

FLASHING GRADE is a thixotropic, acrylic, highly flexible sealant, formulated to seal seams, penetrations, flashings, metal roof fasteners, and other areas to fill voids in the substrate prior to finish coat application. FLASHING GRADE can be brushed, rolled or extruded. Standard color is white.

- Apply FLASHING GRADE to all fasteners; all panel side laps, all panel end laps, rake edges, ridge caps, gutter straps, curb flashings and penetrations.
- Use a brushing motion perpendicular to the seam to force the FLASHING GRADE between the metal surfaces.
- Apply a 3" band of FLASHING GRADE at a thickness of not less than 60 wet mils over the top of all seams and flashings.

**Note:** Failure to apply the minimum thickness of 60 wet mils can result in poor performance of the product. The maximum thickness of FLASHING GRADE applied in one coat is 120 wet mils. Applying FLASHING GRADE thicker than 120 wet mils could result in surface splitting due to trapped moisture. If a thicker buildup of product is desired, the FLASHING GRADE should be applied in multiple coats.

### DETAIL TIPS

**Deteriorated End Laps** – Install minimum 6" wide Fabric Tape at open end laps and coat with FLASHING GRADE. Clean end laps of all existing sealants and coatings to expose metal panels. Center 6" Fabric Tape over end lap, ensuring that tape is continuous up and over all ridges and/or standing seams. Coat Fabric Tape with FLASHING GRADE and feather edges onto roof panel.

**Round Penetrations – Install** new flexible “boot” flashings at round projections. Install boot flashings after EPOXY HYDROPRIMER for METAL has been installed but before COOL BARRIER ROOF TOP COAT is installed. Apply FLASHING GRADE over all fasteners and flanges and feather edges onto roof panel. Ensure that all flanges are sealed tightly to the metal panels and that the termination is clamped and sealed with one-part urethane sealant.

**Metal Curb Flashing –** On metal roofs with integral metal curbs, treat the laps around the base of the curbs just as an end lap. Clean all existing sealants and coatings to expose the metal lap. Apply FLASHING GRADE to laps and fasteners. For deteriorated curb flashings, apply Fabric Tape and coat with FLASHING GRADE, feathered on edges for smooth transition to metal panels.

**Lightning Protection –** Contractors may encounter lightning protection systems installed on the roof. Most lightning protection systems consist of a series of metal lightning rods connected together by a metallic ground wire. To ensure 100% coverage, the existing lightning rods and ground wire mounts should be removed prior to applying EPOXY HYDROPRIMER for Metal and COOL BARRIER PROTECTA CLEAR Finish. Reinstall lightning protection system after roof has been coated.

**Abolin Co requires an adhesion test performing of FLASHING GRADE on all surfaces prior to next steps coating applications.**

#### **Step 4. COOL BARRIER ROOF Top Coat**

COOL BARRIER ROOF Top Coat is a highly reflective elastomeric coating. COOL BARRIER ROOF Top Coat offers exceptional durability and UV stability to extend roof life. Attractive bright white color reduces energy consumption. Apply by brush, roller, or airless sprayer. COOL BARRIER ROOF Top Coat is a single component, professional grade acrylic finish coat.

#### **COOL BARRIER ROOF Top Coat coverage rates:**

- For 5 yr Limited Material Warranty:
  - Top Coat’s coverage rate = 1 liter per 1,2 square meter (min.).
  - **Abolin Co requires 2 coats**, applied at a rate of 0,5 liter per 1,2 square meter, per coat (app 17-18 wet mils per coat).
- For 10 yr Limited Material Warranty:
  - Top Coat’s coverage rate = 1,5 liters per 1,2 square meters (min.).
  - **Abolin Co requires 3 coats**, applied at a rate of 0,5 liter per 1 square meter, per coat (app 17-18 wet mils per coat).

**Note:** Do not apply COOL BARRIER ROOF Top Coat at a coverage rate higher than 1 liter per 1,2 square meter, per coat as it may result in surface splitting due to trapped moisture. When applying multiple coats, COOL BARRIER ROOF Top Coat should always be applied at a rate of 16 – 20 wet mils.

**The second coat of COOL BARRIER ROOF Top Coat should be applied perpendicular to the first coat.**

#### **For periodic ponded water areas**

COOL BARRIER PROTECTA CLEAR Finish Coat is to be applied in areas of light ponding (not exceeding 48 hours). COOL BARRIER PROTECTA CLEAR is to be installed as a finish coat over the last coat of COOL BARRIER ROOF. COOL BARRIER PROTECTA CLEAR should extend several meter in all directions beyond ponded area. COOL BARRIER PROTECTA CLEAR Finish Coat is formulated to improve resistance to damage caused by periodic ponding. However, COOL BARRIER PROTECTA CLEAR FINISH is not intended as a “cure all” for ponded water situations and prolonged exposure to moisture in ponded areas may be detrimental to COOL BARRIER PROTECTA CLEAR Finish Coat.

**COOL BARRIER PROTECTA CLEAR coverage rates:**

- For 5 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 8 square meter (min.) (4 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as the final finish coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

- For 10 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 4 square meters
- (min.) (8 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as a top coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

**COATING GRANULATED MODIFIED BITUMEN CAP SHEET OR MINERAL SURFACE BUR CAP SHEET**

**Note:** If these surfaces have been previously coated with an unknown coating, an adhesion test should have been performed prior to bidding the project.

**Step 1. Surface Preparation**

All loose existing coatings and other debris must first be removed. It may be necessary to add a fungicide to remove heavy accumulations of fungi and algae.

**Repair existing roof system per guidelines published in NRCA's Repair Manual for Low-slope Membrane Roof Systems. Blisters, holes, splits or tears, and other damaged areas must be repaired prior to coating.**

**Surface Preparation Tips**

- Newly installed granulated modified bitumen or mineral surfaced cap sheet roof systems should weather a minimum of 90 days.
- All surfaces to receive elastomeric reflective coatings must be clean, dry and free of any debris or contaminants that would inhibit proper adhesion of the elastomeric coating.
- Cleaning of the surfacing can be achieved by power brooming, vacuuming, power washing or other means necessary to provide a clean surface.
- If power washing, notify building owner to be prepared for the possibility of some water entering the building during the power washing process. Avoid spraying directly into seams or open penetrations. Power washing effectively removes existing dirt and debris that would adversely affect the bonding of coatings. Excessively soiled surfaces may require additional cleaning or scrubbing with a stiff-bristle broom or scrub brush. Use care to prevent damage to the roof surface while power washing.
- The existing roof surface must be sound. Trapped moisture within the roof system must be removed and all wet or damp materials replaced with new, like materials.
- Coating over existing aluminum coating requires the application of either waterbased epoxy primers or Abolin Co Solvent Based Primer prior to applying the first coat of COOL BARRIER ROOF Top Coat. Power wash the existing roof surface to remove all loose and flaking aluminized coating. High pressure power washing may not be adequate to remove all loose and flaking aluminized coating. It may be necessary to brush the coating with a stiff bristle broom after power washing the first time to remove any remaining loose and flaking coating. After brushing, power wash again. After the roof has thoroughly dried, apply the waterbased epoxy primer in one coat at a rate of 1 liter per 5 square meters, depending on the roughness of the substrate. Allow the primer to dry a minimum of 48 hours before applying the elastomeric reflective coating. The primer must be thoroughly dry and firm enough to take foot traffic without damage prior to being coated. Drying time will be longer, 3 to 7 days, in cool and/or damp weather. Test for dryness in slowest drying areas by rubbing surface with a wet finger. Primer is dry if no staining occurs on your finger and the primer does not distort under pressure.

- All blisters shall be cut out and patched with the appropriate materials. Wet materials must be removed and replaced with new materials.
- Repairs to the existing roof system should be completed following good roofing practices and within the guidelines as indicated in the NRCA Roof Repair Manual.
- On severely alligatored\* membranes or membranes with exposed felts, an application of HYDRODUR V200 primer is strongly recommended to provide a smooth substrate to receive the new elastomeric reflective coating. The primer should be applied in two coats at a rate of 1 liter per 4 square meters per coat.

Allow the primer to dry a minimum of 48 hours before applying the elastomeric reflective coating.

The primer must be thoroughly dry and firm enough to take foot traffic without damage prior to being coated. Drying time will be longer, 3 to 7 days, in cool and/or damp weather. Test for dryness in slowest drying areas by rubbing surface with a wet finger. HYDRODUR V200 primer is dry if no staining occurs on your finger and the primer does not distort under pressure.

- All mechanical equipment curbs, pipe flashings and other roof penetrations shall be resealed with Flashing Grade Sealant.
- The roof must have good, positive drainage. **All ponding areas (exceeding 48 hours) must be corrected by leveling or installing new roof drains prior to application of the elastomeric reflective coatings.**

\*Alligatoring describes the cracking of the surfacing bitumen on a built-up roof, producing a pattern of cracks similar to an alligator's hide: the cracks may or may not extend through the roof membrane.

## Step 2. FLASHING GRADE

FLASHING GRADE is a thixotropic, acrylic, highly flexible sealant. FLASHING GRADE is formulated to seal penetrations, flashings and other areas. Can be brushed, rolled or extruded. Standard white color.

- Apply FLASHING GRADE to seal all penetrations, flashings, laps on parapet walls, and to fill cracks or holes over 1/8".

**Note:** Failure to apply the minimum thickness of 60 wet mils can result in poor performance of the product. The maximum thickness of FLASHING GRADE applied in one coat is 120 wet mils. Applying FLASHING GRADE thicker than 120 wet mils could result in surface splitting due to trapped moisture. If thicker buildup of product is desired the FLASHING GRADE should be applied in multiple coats.

## Step 3. COOL BARRIER ROOF Top Coat (For coating over asphaltic substrates)

COOL BARRIER ROOF Top Coat is a white, non-yellowing, acrylic based elastomeric reflective coating.

It exhibits exceptional exterior durability and UV stability, superior flexibility in low temperatures and high reflectivity. COOL BARRIER ROOF Top Coat will maintain its cool, white, protective seal over asphaltic substrates that would stain and darken conventional white, acrylic coatings. Attractive bright white reduces energy consumption. Apply by brush, roller, or airless sprayer. COOL BARRIER ROOF Top Coat is a single component, professional grade elastomeric reflective acrylic top and finish coat.

### COOL BARRIER ROOF Top Coat coverage rates:

#### Over Granulated Mod Bit Cap Sheet or Mineral Surface BUR Cap Sheet:

- For 5 yr Limited Material Warranty:
  - Finished coverage rate = 1 liter per 1 square meter (min.).
  - **Abolin Co requires 2 coats**, applied at a rate of 0,5 liter per 1 square meter, per coat.
- For 10 yr Limited Material Warranty:
  - Finished coverage rate = 1,2 liter per 1 square meter (min.).
  - **Abolin Co requires 3 coats**, applied at a rate of 0,4 liters per 1 square meter, per coat.

**Note:** Do not apply COOL BARRIER ROOF Top Coat at a coverage rate higher than 0, 8 lit per 1 square meter per coat as it can result in surface splitting due to trapped moisture. When applying multiple coats, COOL BARRIER ROOF Top Coat should always be applied at a rate of 0, 4 to 0, 8 liters per 1 square meter. The subsequent coats of COOL BARRIER ROOF Top Coat should be applied perpendicular to the prior coat.

### **California Title 24 Compliance**

To meet California's Title 24 requirements, a top coat of COOL BARRIER PROTECTA CLEAR finish coat must be applied over the last coat of COOL BARRIER COOL Top Coat.

### **For periodic ponded water areas**

COOL BARRIER PROTECTA CLEAR finish coat is to be applied in areas of light ponding (not exceeding 48 hours). COOL BARRIER PROTECTA CLEAR finish coat is to be installed as a finish coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR finish coat should extend several feet in all directions beyond ponded area. COOL BARRIER PROTECTA CLEAR finish coat is formulated to improve resistance to damage caused by periodic ponding. However, COOL BARRIER PROTECTA CLEAR finish coat is not intended as a "cure all" for ponded water situations and prolonged exposure to moisture in ponded areas may be detrimental to COOL BARRIER PROTECTA CLEAR finish coat.

### **COOL BARRIER PROTECTA CLEAR coverage rates:**

- For 5 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 8 square meter (min.) (4 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as the final finish coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

- For 10 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 4 square meters (min.) (8 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as a top coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

### **COATING NEW SPRAY POLYURETHANE FOAM (SPF/PUF)**

**Positive slope required.**

#### **Step 1. Surface Preparation**

Abolin Co elastomeric reflective Coatings are approved over new spray polyurethane foam (SPF) roofs only. Abolin Co elastomeric reflective Coatings are not to be used to recoat an existing SPF roof system.

#### **Surface Preparation Tips**

- Surface of SPF roof must be smooth to orange peel in texture. "Popcorn" finish is not acceptable
- All oxidized foam must be removed and replaced
- Surface of roof shall be free from undulations and "bird bath" pockets and be sloped for positive drainage
- No pinholes or "fisheyes" are allowed on surface before coating.

#### **Step 2. COOL BARRIER ROOF Top Coat**

COOL BARRIER ROOF Top Coat offers exceptional durability and UV stability to extend roof life. Attractive bright white color reduces energy consumption. Apply by brush, roller, or airless sprayer. COOL BARRIER ROOF Top Coat is a single component, professional grade highly elastomeric coating Top & Finish.

#### **COOL BARRIER ROOF Top Coat coverage rates:**

- For 5 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 1 square meter (min.).
- **Abolin Co requires 2 coats**, applied at a rate of 0, 5 liter per 1 square meter, per coat (16-18 wet mils per coat).
- For 10 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 1 square meter (min.).
- **Abolin Co requires 2 coats**, applied at a rate of 0, 5 liter, per 1 square meter, per coat (16-18 wet mils per coat).

**Note: Do not apply COOL BARRIER ROOF Top Coat at a coverage rate higher than 0, 8 liter per 1 square meter, per coat** as it can result in surface splitting due to trapped moisture. When applying multiple coats, COOL BARRIER ROOF Top Coat should always be applied at a rate of 0, 4 to 0, 8 liter per 1 square meter. **The second coat of COOL BARRIER ROOF Top Coat should be applied perpendicular to the first coat.**

#### **For periodic ponded water areas**

COOL BARRIER PROTECTA CLEAR finish coat is to be applied in areas of light ponding (not exceeding 48 hours). COOL BARRIER PROTECTA CLEAR finish coat is to be installed as a finish coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR finish coat should extend several feet in all directions beyond ponded area. COOL BARRIER PROTECTA CLEAR finish coat is formulated to improve resistance to damage caused by periodic ponding. However, COOL BARRIER PROTECTA CLEAR finish coat is not intended as a “cure all” for ponded water situations and prolonged exposure to moisture in ponded areas may be detrimental to COOL BARRIER PROTECTA CLEAR finish coat.

#### **COOL BARRIER PROTECTA CLEAR coverage rates:**

- For 5 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 8 square meter (min.) (4 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as the final finish coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

- For 10 yr Limited Material Warranty:
- Finished coverage rate = 1 liter per 4 square meters (min.) (8 wet mils per coat).

**COOL BARRIER PROTECTA CLEAR is to be used as a top coat over the last coat of COOL BARRIER ROOF Top Coat. COOL BARRIER PROTECTA CLEAR is not be used as a substitute for the last coat of COOL BARRIER ROOF Top Coat.**

#### **SPECIAL CONDITIONS**

#### **COLD WEATHER APPLICATION TIPS**

All of Abolin Co Elastomeric Reflective Coatings are water based products and use evaporation to dry, or cure, to form a weather resistant film. It is very important that each coat application thoroughly dry before additional moisture is added to the material. Water based coatings can fail when moisture from above or below gets into the coating before it dries (cures) completely. If each coat is not thoroughly dry, the water still trapped in the coating will allow moisture from the outside to enter the coating and affect the coating's adhesion to the substrate. The following are some examples where additional moisture can be added to the system:

- Recoating before the first coat has completed dried
- Rain or dew settling on the surface within 4 hours of application
- Applying to a damp or wet surface
- Diluting the coating with water before application

As temperatures fall and humidity rises, drying times increase. Acrylic Elastomeric coatings dry much slower in 15 °C weather than in 30 °C degree weather. Likewise, acrylic elastomeric coatings dry much slower in 80% relative humidity than in 50% relative humidity. Direct sunlight is very helpful in drying and gloomy skies will definitely slow drying. The number of drying hours in a day is reduced as the season moves into autumn and winter. Also, the temperature drops much more quickly in those shorter days after the sun sets. Condensation forming on roofs at night (dew) is quite common in cooler weather. The dew on a roof will delay construction until the moisture has completely dried. It may take a few hours for the dew to leave the roof pushing back start times to mid or late morning. If conditions on the roof are unfavorable, wait!

Thicker coats require longer drying times and can lead to moisture problems. Applying a second coat on top of a prior coat that is not thoroughly dry will introduce moisture into the system and possibly affect the bond to the substrate or between coats.

To help eliminate cool weather application problems, follow these recommendations:

- Coat when the temperatures are above 15 °C and unlikely to fall below 10 °C during drying time (a minimum of 4 hours after application).
- Coat only on sunny days when the temperature is below 20 °C and when no moisture is predicted for 24 hours. In cool weather, stop coating early in the afternoon (2 pm) to allow for drying.
- Coat over a dry roof only and don't dilute coatings.
- Allow extra drying time for shaded areas on the roof. Coat these areas first if possible or wait for better weather.
- If roof gets wet overnight, do not coat small areas with moisture on surface until sufficiently dry.
- Wait for dry weather forecast. Consider possibility of rain, day and night temperatures, and the dew point forecast.

### **HOT WEATHER APPLICATION TIPS**

To help eliminate hot weather application problems, follow these recommendations:

- Do not coat when roof surface temperatures are above 40 °C. High surface temperatures can vaporize the moisture within the coatings causing small blisters and inadequate adhesion.
- Install multiple thinner finish coats to prevent blistering and cracking when temperatures are around 40 °C or higher. When encountering high temperatures and high humidity, Abolin Co strongly recommends applying the Top Coat and Finish coatings in multiple thinner coats. Remember to always install multiple finish coats perpendicular to the prior coat.
- Coat in the mornings when it is cooler after any dew or moisture has dried and stop applying coatings in the early afternoon before the hottest part of the day.

### **INSTALLATION USING ROLLERS OR BRUSHES**

**When installing elastomeric reflective coatings using a roller or brush, do not over work the product. Coatings are to be applied with a minimum of working the product to ensure maximum thickness.**

### **PERIODIC PONDING (LESS THAN 48 HOURS)**

COOL BARRIER PROTECTA CLEAR is used in areas that require a durable elastomeric coating but have minor ponding water - a condition that excludes coating with conventional acrylics. COOL BARRIER PROTECTA CLEAR may be applied over the top coat of COOL BARRIER ROOF Top Coat in areas where light periodic ponding may occur. COOL BARRIER PROTECTA CLEAR is formulated to improve resistance to damage caused by periodic ponding. However COOL BARRIER PROTECTA CLEAR is not intended as a "cure all" for ponded water situations and prolonged exposure to moisture in ponded areas may be detrimental to COOL BARRIER PROTECTA CLEAR. It is recommended that the COOL BARRIER PROTECTA CLEAR be applied several meter in all directions beyond the extent of the ponded area. COOL BARRIER PROTECTA CLEAR is to be used as a top coat over the last coat of COOL BARRIER ROOF Top Coat only.

**NOTE:** All ponding must evaporate within 48 hours to maintain the material warranty. Areas where ponded water exceeds 48 hours may require the installation of new drains to provide proper drainage or tapered insulation and new, compatible roofing materials to create positive drainage to the existing drain system. NRCA guidelines for ponding water state, "If the ponding condition cannot be eliminated, perform more frequent inspections to monitor and maintain the membrane surface affected by the ponding condition. Implement permanent solutions at the time of reroofing."

## **MAKING REPAIRS ON ABOLIN CO ELASTOMERIC REFLECTIVE COATINGS**

Repairs are easy. Simply clean the area thoroughly to be coated, then apply new product. Abolin Co Elastomeric Reflective Coatings are water based which means no expensive solvents to thin product or clean equipment.

## **ACCESSORIES**

**Fabric Tape** of synthetic rubber and resin adhesive tape, which remains flexible even in cold temperatures. The fabric facer must be designed to be coated to match the surrounding roofing surface. Fabric Tape must be coated. Fabric Tape may be used on metal roofs to strip in side laps, end laps, and other penetrations prior to the application of the Abolin Co Elastomeric Reflective Coating System. It must be suitable for wood, glass, plastics, concrete and metals. The product may be used to repair gutter seams, chimney flashings, metal roofs on mobile homes and transport vehicles, and leaking ductwork. First power wash with proper **CLEANER**, repair holes, damaged areas, and remove old caulk. Then center Fabric Tape over area cutting to size, peel release paper, adhere the tape over problem area, and roll securely into place with a 2" steel or nylon roller.

**Aluminum-faced conforming disks consisting of heavy modified asphalt base, reinforced with high-density polymer films, for tear strength to seal fasteners on metal roofs quickly and easily.** Instant water-tight seal prevents leaks, rust, and fastener movement. First power wash with proper **CLEANER**, repair holes, damaged areas, and remove old caulk. Peel release paper and center **conforming disks** over problem fastener. Complete application by centering securing tool (included with each package), and push/twist to create a tight seal.

## **IMPORTANT NOTES**

**(Details and Information subject to change):**

When applying coatings over an existing roof under warranty, the building owner should check with existing roofing system manufacturer, as this coating application may void warranty. In all cases, the existing roofing system must be in sound condition. Abolin Co is NOT responsible for any defects in the existing roofing system. The information herein should not be considered all-inclusive and should always be accompanied by good application practices. The applicator has sole responsibility for the quality of application of the coating system. Abolin Co requires proper surface preparation of the existing roofing system. To repair blisters, splits, and other surface defects, Abolin Co recommends that they be repaired in accordance with the published NRCA Repair Manual for Low-Slope Roofing Systems guidelines prior to application of Abolin Co Elastomeric Reflective Coatings.

Energy savings from the installation of an Elastomeric Reflective Roof Product are climate specific and may vary significantly from building to building. The greatest savings will occur in buildings located in hot and sunny climates that have a high roof surface to building volume ratio, and lower levels of attic insulation.

## **Questions?**

Go to [www.abolinco.com](http://www.abolinco.com) or give us a call at 0030-210-5575568 from Monday to Friday, Local Working Hours. Ask to speak with the Abolin Co Technical Department.