

Coat'N'Cool^{HMS}

High-Tech Coatings for High-Temp Conditions
HEAT MANAGEMENT SYSTEM FOR SURFACES EXPOSED TO DIRECT SUNLIGHT

PRODUCT APPLICATION GUIDE

5417 Topcoat

Description:

Coat 'N' Cool[®] 5417 Topcoat is a long lasting, easy to apply water-borne epoxy coating specially engineered to reflect solar radiation in the visible, ultraviolet (UV) and infrared (IR) spectrum emitted from the sun. Reflecting solar radiation reduces both the exterior and interior temperatures of a structure, which may reduce the cost of energy used for cooling by 10 to 30 percent.

5417 Topcoat is designed to adhere to **Coat 'N' Cool[®] 5407 Basecoat** only and is not designed as a stand-alone product.

Environmental Advantages/Benefits of the

5417 Cool Roof System:

- Superior water-borne epoxy technology
- Formulated using highly reflective, fade resistant pigments
- Reduces exterior surface temperatures by 50°F
- Reduces interior temperatures up to 20%
- Up to 30% energy saving towards cooling
- Increase photovoltaic efficiency by 10 – 20%
- Reduce carbon footprint
- Increase occupant comfort
- Resists ponding water
- Extends roof life
- Class A fire rated coating
- Easy water clean-up

Application Surfaces:

- Low Slope/Step Slope
- Built-up Roofs systems
- Single ply roofs
- Metal roofs
- Modified bitumen
- Polyurethane foam
- Concrete/Masonry
- Wood
- Vertical surfaces



Important Application Precautions:

- Apply on a clear, sunny day when temperatures are between 50° and 100°F.
- Do not apply when temperature is expected to drop below 50°F within 24 hours.
- Do not apply if rain is forecast within 24 hours of application.
- **Mildew:** DO NOT PAINT OVER MILDEW. Mildew is a fungus, brown, black, grey or even white in color, and will rapidly grow through any coating applied over it. A solution of 50% household bleach and 50% water will kill the mildew.
- If you have an older roof in poor condition, lost roofing or shingles, tears and severe splits, you may need a new roof. A neglected roof may not offer the firm sub surface necessary to provide proper adhesion of a membrane type coating. If in doubt, consult a qualified roofer. Roof surface must have proper drainage, installation and slope to provide positive drainage.

Surface Preparations:

Proper roof preparation is essential for successful coating application.

1. The roof surface must be dry, clean and free of all loose and oxidized material, dirt, oil and other contaminants.
 2. All loose gravel should be removed by power blower and/or vacuuming. High pressure power washing and/or mechanical scrubbers may be necessary to remove tightly adhering contaminants. Do not power wash if the roof has water leaks.
 3. Any unsound areas in the roof should be repaired or replaced. New asphalt should be exposed for 45 to 60 days before coating.
 4. Deteriorated or badly corroded metal should be replaced. Rusted areas should be mechanically abraded to remove all loose rust and then cleaned with a muriatic acid cleaning solution.
 5. New metal roofs exhibiting any type of surface film should be washed with a muriatic acid cleaning solution to remove film.
 6. Low areas that hold excessive ponding water must be brought into conformance by installing additional drains or adding additional slope to existing drains. Excessive ponding is any area that holds in excess of ½" of water as measured 24 hours after rainfall.
 7. Using **XP3 White Bond** patch all cracks, seams, flashings, skylights, vents, etc. For older roofs and/or roofs with cracking, alligating, failing systems and minor leaks use polyester roofing fabric to reinforce the roof system (See Application System for XP3 White Bond).
3. Provided that a clean and sound surface is prepared (see surface preparations above), and a coat of **5407 Basecoat** has been applied per application guide instructions at a rate of 1.5 gallons per 100 square feet, apply **5417 Topcoat** at a rate of 1.5 gallons per 100 square feet. **5417 Topcoat** be can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller. It is recommended to cross-hatch the two coats whenever possible.
 4. Additional coats of **5417 Topcoat** may be applied to achieve desired look.

Urethane Foam Roof:

1. Remove all old delaminated coating and vacuum or power blow clean.
2. **Do not open the roof system.**
 - a. Use a Poly-Fabric Seam application using **1752 Elastomeric Underseal** to patch all blisters and sump areas until surface is smooth (refer to the 1752 Elastomeric Application Guide for a recommended Poly Fabric Seam application).
3. Coat with 2-3 coats of **1752 Elastomeric Underseal** until smooth.
4. In areas of standing water less than ½ inch apply 2 coats of **1752 Elastomeric Underseal** with Poly-Fabric with 2 more coats of **1752 Elastomeric Underseal**. (note area must be clean and dry)
 - a. Areas of standing or ponding water at a depth greater than of ½" after 24 hours must be addressed by a qualified roofer.
5. Re-emulsify each container prior to application by using a power mixer.
6. Provided that a clean and sound surface is prepared (see surface preparations above), 1 coat of **5407 Basecoat** should be applied at a rate of 1.5 gallons per 100 square feet. **5407 Basecoat** can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller.
7. Provided that a coat of **5407 Basecoat** has been applied at a rate of 1.5 gallons per 100 square feet, apply **5417 Topcoat** at a rate of 1.5 gallons per 100 square feet. **5417 Topcoat** be can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller. It is recommended to cross-hatch the two coats whenever possible.
8. Additional coats of **5417 Topcoat** may be applied to achieve desired look.

Mineral Cap Roof Application (low slope, steep slope, single ply, modified bitumen roofs):

1. Re-emulsify each container prior to application by using a power mixer.
2. Provided that a clean and sound surface is prepared (see surface preparations above), and a coat of **5407 Basecoat** has been applied per application guide instructions at a rate of 1.5 gallons per 100 square feet, apply **5417 Topcoat** at a rate of 1.5 gallons per 100 square feet. **5417 Topcoat** be can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller. It is recommended to cross-hatch the two coats whenever possible.
3. Additional coats of **5417 Topcoat** may be applied to achieve desired look.

Metal Roof Application:

1. Prepare the metal roof by removing all loose material. Clean and etch.
2. Re-emulsify each container prior to application by using a power mixer.

Concrete/Masonry:

1. Re-emulsify each container prior to application by using a power mixer.

2. Provided that a clean and sound surface is prepared (see surface preparations above), and a coat of **5407 Basecoat** has been applied per application guide instructions at a rate of 1.5 gallons per 100 square feet, apply **5417 Topcoat** at a rate of 1.5 gallons per 100 square feet. **5417 Topcoat** be can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller. It is recommended to cross-hatch the two coats whenever possible.
3. Additional coats of **5417 Topcoat** may be applied to achieve desired look.

Wood:

1. Re-emulsify each container prior to application by using a power mixer.
2. Provided that a clean and sound surface is prepared (see surface preparations above), and a coat of **5407 Basecoat** has been applied per application guide instructions at a rate of 1.5 gallons per 100 square feet, apply **5417 Topcoat** at a rate of 1.5 gallons per 100 square feet. **5417 Topcoat** be can be sprayed with commercial sprayer (30" fan tip) or applied with a ½ inch nap paint roller. It is recommended to cross-hatch the two coats whenever possible.
3. Additional coats of **5417 Topcoat** may be applied to achieve desired look.

Vertical Applications:

See Surface Preparations. Protect areas of overspray BEFORE surface preparation.

Sprayer Application:

1. When conducting a vertical spray application it is best to spray several light coats (ghost spray) to achieve the desired thickness and spread rate to assure that overspray and dripping do not occur.
2. Assure that **5407 Basecoat** has been properly applied as original surface color is no longer visible when dry.
3. Allow **5407 Basecoat** to dry for 4 hours after desired area is completely coated.
4. Once completely dry, apply the desired **5417 Topcoat** by spraying several light coats (ghost spray) to achieve the desired thickness and spread rate to assure that overspray and dripping do not occur.
5. **5417 Topcoat** is properly applied when **5407 Basecoat** is no longer visible when dry.

Roller Application:

1. When conducting a vertical roller application, use a ½ inch nap roller to apply **5407 Basecoat**. To avoid coating from dripping, apply **5407 Basecoat** using multiple thin coats.

2. Assure that **5407 Basecoat** has been properly applied as original surface color is no longer visible when dry.
3. Allow **5407 Basecoat** to dry for 4 hours after desired area is completely coated.
4. Once completely dry, apply desired **5417 Topcoat** by use a ½ inch nap roller. To avoid coating from dripping, apply **5417 Topcoat** using multiple thin coats.
5. **5417 Topcoat** is properly applied when **5407 Basecoat** is no longer visible when dry.

Coverage:

For smooth surfaces: 1.5 - 2 gallons per 100 sq. ft. (**5407 Basecoat** required)

For rough surfaces: 1.5 - 2 gallons per 100 sq. ft. (**5407 Basecoat** required)

Color Options:

- Currently eight colors rated with CRRC.
- 30 standard colors available
- Special Matches also available

Limitations:

5417 Topcoat is not recommended for medium to heavy traffic areas. Not for use on EPDM or rubberized roofs.

Thinning:

Do not dilute or thin.

Drying/ Cure Time:

Initial cure time is 1 hour. Allow 4 hours minimum before applying additional coats. Cool and/or humid weather conditions will slow the drying time.

Clean Up:

Clean up with warm water and soap is recommended.

Handling and Storage:

Do not allow **5417 Topcoat** to freeze in container. Store **5417 Topcoat** in a dry protected area and in original container

Technical & Physical Properties				
Warranty Systems: Various warranties are available, see warranty specification sheet.	Physical Property	ASTM	Result	Requirement
	Tensile Strength @73°F	D2370	490 psi	100 min
	Elongation @73°F	D2370	73%	200 min
	Permeance, perms	D1653	7.54	50 max
The maximum V.O.C. of this product does not exceed 50 grams/liter. WARNING! If you scrape, sand or remove old paint, you may release lead dust. LEAD IS TOXIC. Contact the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead .	Solar Reflectance/ Thermal Emittance			Section 118: (i) 1 Requirement
	Solar Reflectance	CRRC-1	varies by color	0.70 min
	Thermal Emittance	CRRC-1	varies by color	0.75 min

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