



**MACoat™ Solar Reflective Finish**

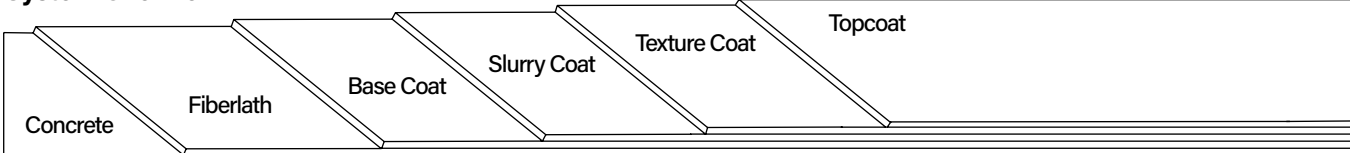
**Description**

Westcoat's MACoat™ Solar Reflective Finish System is a fiberlath reinforced deck system installed with a series of two or three separate waterproof acrylic applications and sealed with Westcoat's series of Solar Reflective SC-10 Acrylic Topcoats, that utilize infrared (IR) pigments. The finished product weighs approximately one pound per square foot. MACoat™ Solar Reflective Finish is a Class III permeable vapor retarder and waterproofer. It allows water vapor to migrate up and pass through the coating, while still shedding liquid water from off the top. This is different from most traditional urethane coatings, which are not permeable. This system reduces the Urban Heat Island Effect and can lower the surface temperature. It also meets the Cool Roof requirements of California Title 24\*.

**Uses**

The MACoat™ Solar Reflective Finish System is suitable for commercial and residential environments. It is designed for use on balconies, corridors, stairs and landings. It is regularly specified for homes, hotels, condominiums, apartments, office buildings and is suitable for parking structures with vehicular traffic. In many cases it can be applied over existing deck systems to provide an excellent method for the rehabilitation of problem surfaces.

**System Overview**



System Data					
<b>Coverages</b>	<b>Base Coat</b> 240-275 ft <sup>2</sup> per batch	<b>Slurry Coat</b> 300-350 ft <sup>2</sup> per batch	<b>Smooth Texture (Optional)</b> 300-350 ft <sup>2</sup> per batch	<b>Texture Coat (Optional)</b> 150-200 ft <sup>2</sup> per batch	<b>Topcoat</b> 200-400 ft <sup>2</sup> per gallon
<b>Components</b>	<a href="#">WP-51 Polyurethane Sealant</a> <a href="#">EC-72 Epoxy Patch Gel</a> <a href="#">WP-47H Fiberlath Heavy Duty</a> <a href="#">WP-47A Seam Tape</a> <a href="#">WP-90 Waterproofing Resin</a> <a href="#">WP-81 Cement Modifier</a> <a href="#">TC-1W White Basecoat Cement</a> <a href="#">TC-2 Smooth Texture Cement</a> <a href="#">SC-10 Solar Reflective Acrylic Topcoat</a>			<b>Shelf Life</b>	
				1-2 years 2 years 5 years 1 year 2 years 2 years 1 year 1 year 2 years	
<b>Certifications</b>	Class A Fire Rating (over concrete) Meets AC-39 Standards for Walking Decks City of LA Approval RR 25983 VOC Emission Test Certificate - Certificate No: 170824-01 CRRC Product ID# 1316-0001: Solar Reflective Finish SC-10-SR Gray CRRC Product ID# 1316-0002: Solar Reflective Finish SC-10-SR Tan				

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SPECIALTY COATING SYSTEMS

**SYSTEM  
SPECIFICATION**

**WP**

**WATERPROOF**  
RELIABLE MOISTURE BARRIERS

**MACoat™** Solar Reflective Finish

### Advantages

Meets California Title 24 Requirements\* • Helps Reduce the Urban Heat Island Effect • Lowers the Surface Temperature • Flexible • Durable • Fast Access After Installation • Choice of Colors and Textures • Tough Final Coat is UV Resistant • Safe, Skid Resistant Textured Finish • Environmentally Safe Acrylics • Waterproof

### Inspection

Concrete must be a minimum of 2 inches thick. It must be clean, dry and free of grease, paint, oil, dust, curing agents, laitance or any foreign material that will prevent proper adhesion. The concrete should be at least 2,500 PSI, porous and able to absorb water. A minimum of 28 days curing time is required on all concrete. Decks should meet local building code.

### Moisture

All concrete should be tested for moisture before applying a seamless coating. If moisture emissions exceed 5 lbs/1000 square feet (ASTM F1869) or if the relative humidity (RH) exceeds 75% (ASTM F2170), please refer to the EC-15 Moisture Vapor Barrier Product Specification Sheet.

### Preparation

Prepare concrete to a profile equal to CSP 3 as specified by ICRI. Over existing coating, abrade the surface and do an adhesion test. For rough concrete, a slurry coat may be applied. Create the slurry coat by adding one gallon of WP-81 Cement Modifier and up to ½ gallon of water into a clean mixing bucket and add one bag of TC-1 Basecoat Cement. Mix until uniform with a mechanical mixer at a low rpm. Trowel the slurry mix over the surface to achieve a smooth finish. Coverage of the slurry coat is between 100-150 square feet per batch. Using a brush wet with water, feather all outside edges. After surface is dry (usually 30 minutes to 2 hours at 70 degrees), scrape or grind off any ridges or trowel marks. Applied prior to the MACoat™ installation.

### Concrete Expansion Joints

Moving expansion joints should be honored and filled with a 2 part urethane sealant (approved by Westcoat). Sides of joints should be cleaned and applied per joint sealant manufacturer's recommendation after the MACoat™ process is completed.

### Concrete Seams and Cracks

Cracks greater than 1/32 inch should be routed out 1/4 x 1/4 inch. Install WP-47A Seam Tape over all cracks and seams. Apply EC-72 Epoxy Patch Gel into the tape with a trowel or putty knife to smooth and broadcast with 30 grit silica sand to allow adhesion of the coating. Allow EC-72 3-4 hours to cure before the next coat. This is a remedial approach to patch cracks and there is no guarantee that cracks will not reappear.

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### Concrete Repair

For concrete that needs repairs beyond just dormant cracks, TC-23 Mortar Mix can be used. TC-23 is designed to be used as a general concrete repair mix for horizontal and vertical applications and can be used as a patching/underlayment material under most Westcoat systems. Please refer to the TC-23 Mortar Mix Product Specification Sheet for details.

### Plywood Seams

Seams should be dry and free of debris. WP-47A Seam Tape should be installed over all seams and metal flashing. Apply WP-51 Polyurethane Sealant (or EC-72 for a more ridged seam) into the tape with a trowel or putty knife to smooth. Broadcast with 30 grit silica sand to increase adhesion of the next coat.

An alternate way to minimize re-cracking of concrete and reduce movement of plywood seams is to place a 6 inch strip of WP-40 Sheet Membrane over the plywood seams or the cracks in the concrete as an anti-fracture treatment.

### Primer Requirements

Priming is not required over properly prepared concrete or plywood. When coating over an existing surface, prime with EC-11 Water Based Epoxy at the rate of 300 square feet per gallon and broadcast with 30 grit or 60 grit silica sand to increase adhesion of the next coat.

### Flashing

Flash at the junction of the wall and plywood deck using 4 x 4 inch flashing. Flash the fascia with 2 x 4 inch drip edge flashing. Nail all flashing every 4 to 6 inches. Use a minimum of 26-gauge bonderized sheet metal. Flashing for concrete should be set in a bed of EC-72 and nailed only as needed. The vertical portion of the wall to deck flashing should be nailed at all studs, after the epoxy base has cured. Overlap all seams at least 4 inches. Caulk between overlapped flashing as well as the seam with WP-51 Polyurethane Sealant. (Note: If the flashing is not bonderized, it must be prepared in accordance with SSPC-SP11 surface preparation standards, in order for the coating to adhere properly).

### Base Coat

Lay out WP-47H Fiberlath Heavy Duty reinforcing mesh on the deck, overlapping the seams approximately 2 inches. Combine one bag of TC-1W White Basecoat Cement with five gallons of WP-90 Waterproofing Resin. This mix is larger than five gallons, so if wanting to use a five gallon pail to mix, combine 25 pounds of TC-1W with 2½ gallons of WP-90 by volume and mix with a mechanical mixer until uniform. Pour the mixture into the WP-47H, trowel thin and smooth at the coverage rate of 240-275 square feet per batch. Use a paintbrush to spread the base coat on the flashing, making sure to get the mixture into the seams and corners. Using a brush, wet with water, feather all outside edges. Allow surface to dry for 1-4 hours at 70 degrees. Scrape off any high spots or ridges that may inhibit application of a smooth texture coat. Trim any mesh that is showing on perimeters after the material has hardened.

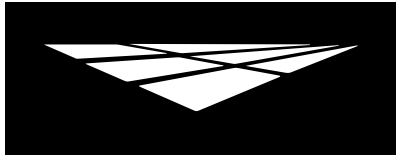
Note: Should deck coating not be completed in one phase or to allow for other construction trades, deck should be covered and protected to avoid being damaged and to keep clean. It may be necessary to power wash the deck to dislodge any construction debris or any other foreign matter.

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#### **Feather Patch**

Smooth all seams or imperfections by mixing one bag TC-1W to five gallons of WP-90 (For five gallon pail mix, combine 25 pounds of TC-1W with 2 ½ gallons of WP-90). Patch all areas where fiberlath is not laminated flat or any visible seams or overlaps. Feather these patches with a paintbrush and water. Scrape or sand all the patches.

#### **Slurry Coat**

Mix one bag TC-1W to five gallons of WP-90 (see Base Coat instructions for five gallon mix) and trowel the entire surface smooth and as thin as possible or at the rate of approximately 300 to 350 square feet per batch. For easier application, you may add up to 1 quart of water to help loosen up the mix. After the texture has dried (30 minutes to 1 hour at 70 degrees) lightly scrape any trowel marks and vacuum the surface clean. You are now ready to apply the knock down texture.

#### **Smooth Texture (Optional)**

For a smooth texture, mix one bag TC-1W to five gallons of WP-90 and trowel the entire surface smooth or at the rate of approximately 300 to 350 square feet per batch. For easier application, you may add up to 1 quart of water to help loosen up the mix. After the cement has dried (30 minutes to 1 hour at 70 degrees) lightly scrape any trowel marks and vacuum the surface clean. You are now ready to apply the topcoat.

#### **Texture Coat (Optional)**

If a texture is desired, combine 1 bag of TC-2 Smooth Texture Cement with 1 gallon of WP-90 Waterproofing Resin. WP-81 may be used for concrete applications. Mix thoroughly with a mechanical mixer. Add up to ½ gallon of water to achieve the desired consistency. Texture can be sprayed, troweled or broomed at a rate of about 150 to 200 square feet per batch. After the texture has dried (30 minutes to 1 hour at 70 degrees), lightly scrape any trowel marks and vacuum the surface clean prior to sealing. To avoid making impressions, the applicator should wear spiked shoes.

#### **Topcoat**

Mix all containers of the SC-10 Solar Reflective Acrylic Topcoat to ensure a consistent color. Roll two thin applications of SC-10 SR using a ⅜ inch to ¾ inch roller at a rate of 200-400 square feet per gallon. Roll the material in two directions to achieve a uniform finish. Coverage will vary according to texture.

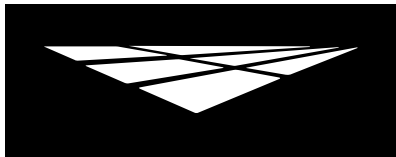
For best results, allow the SC-10 SR 4 to 6 hours drying time before permitting light pedestrian traffic or applying additional coats. Allow 24 hours to cure before heavy traffic is permitted. Allow 48 hours before heavy objects are placed on the surface.

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### Optional Materials

#### Basecoat Options

- For increased waterproofing, when applying basecoat into fiberlath, replace WP-90 with WP-91. Mix at four gallons of WP-91 to one 50 lb bag of TC-1W and add up to 1 gallon of water to aid in application.

#### Cement Options

- TC-23 Mortar Mix may be used as a general concrete repair mix for horizontal and vertical applications and can be used as a patching/underlayment material.

#### Sloping

- Westcoat Slope Technique may be used if additional sloping is required. Please contact your Westcoat Representative for further information.

\* Please refer to Product and System Specification Sheets for additional information.

### Clean Up

Uncured acrylic material can be removed with soap and warm water. If cured, material can only be removed mechanically or with an environmentally-safe solvent.

### Maintenance

Exterior surfaces can be swept daily with water and a broom. For tougher dirt or grease, use degreaser diluted with water 20:1 and a soft bristle brush or broom. Be sure to rinse well. To remove calcium or lime build up, brush diluted 100 grain vinegar onto the surface; be sure to rinse any residue.

The MACoat™ Solar Reflective Finish System should be inspected for wear every 2 to 4 years. The system should be resealed with the appropriate Westcoat SC-10 SR Series Topcoat every 3 to 5 years, depending upon traffic and UV exposure. Contact the original Installer of Westcoat for complete re-coating instructions.

### Health Precautions

Inhalation of vapor or mist can cause headache, nausea, irritation of nose, throat and lungs. Prolonged or repeated skin contact can cause slight skin irritation. Cements contain silicas, dust mask or respirator should be used when mixing, sanding or grinding.

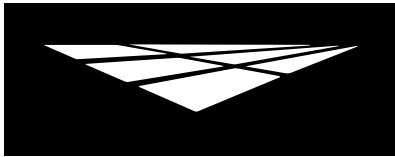
Solvent based products are extremely flammable, extinguish all pilot lights and sources of ignition such as electrical motors. Be sure to have adequate cross ventilation prior to installing.

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**Limitations**

- This system is designed for professional use only.
- Read Product Specification Sheets for every product you will be using before beginning the project.
- Do not apply at temperatures below 50°F or above 90°F.
- Rain will wash away uncured Westcoat acrylic products.
- If inclement weather threatens, cover deck to protect new application.
- Sealers will make the surface slippery, please be aware the texture of the surface and how the sealer will affect the look, feel and skid resistance.
- Approval and verification of proposed colors, textures and slip resistance is recommended.
- Do not allow Westcoat products to freeze.

**Slip Precaution**

Westcoat Specialty Coatings Systems highly recommends the use of a slip-resistant additive to all coatings/systems that may be exposed to wet, oily, greasy or slippery conditions. It is the end user's responsibility to provide a flooring system that meets current safety standards. Westcoat and its distributors will not be responsible for injury incurred during a slip and fall incident. For the current coefficient of friction requirements, please consult your local building codes.

**Test Data**

Test	MACoat™ Standard over Concrete
Accelerated Aging ASTM D-756	Pass
Fire-Retardant Roof Covering ASTM E-108	Class A
One-Hour Fire Test ASTM E-119	--
Bond Strength (Control) ASTM C-297	Pass
Bond Strength (Accel. Aging) ASTM-C297	Pass
Bond Strength (Freeze-Thaw) ASTM C-297	Pass
Abrasion ASTM D-1242	.016 inches
Water Absorption ASTM D-570	3.86%
Chemical Resistance ASTM D-2299	Pass
Freeze-Thaw ASTM C-67	<1%
Concentrated Load AC-39 Section 4.12	Pass
Impact Resistance ASTM D-3746	Pass
Surface Burning Characteristics ASTM E84-17	Class B
Permeance (perms) ASTM E96/E96M-10	4.92 perms
Solar Reflectance - Initial	Gray: 0.69   Tan: 0.74
Thermal Emittance - Initial	Gray: 0.86   Tan: 0.89
SRI (Solar Reflectance Index) - Initial	Gray: 84   Tan: 91

**Solar Reflective Properties**

SR Series Color	SRI Value
Butterscotch	84 **
Canvas	84 **
Coconut	71 **
Coral	66 **
Heather Gray	63 **
Lime	78 **
Powder Blue	77 **
Salmon	72 **
Seaside	73 **
SR Gray	84 *
SR Tan	91 *
Wintermint	79 **

\* Third-party test data. CRRC Prod. ID# 1316-0001 (SR Gray) & 1316-0002 (SR Tan)

\*\* In-House test data

\* SC-10 Solar Reflective Acrylic Topcoat is rated to meet the Cool Requirements of California Title 24 when the colors SR Tan or SR Gray are used. Other colors are not rated at this time.

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