

SUNSHIELD

ACRYLIC ROOF COATING
CRRC, CALIFORNIA TITLE 24,
ENERGY STAR® AND LEEDS COMPLIANT

Technical Data & Application Instructions

PRODUCT DESCRIPTION

SUNSHIELD is an economical, water-based elastomeric acrylic coating that provides high reflectivity as well as good weatherability, ultraviolet resistance and fire retardancy for the protection of polyurethane foam and other roofing substrates. SUNSHIELD is a single-package system designed for easy application with conventional or airless spray equipment, as well as brush or roller.

BASIC USES

SUNSHIELD was especially developed for extending the life of new or existing built-up, metal, concrete, modified bitumen, single-ply and composite shingle roofs by providing a white reflective topcoat. The high reflectivity of SUNSHIELD keeps the roof substrate cool, which not only prolongs its longevity, but saves on energy costs. SUNSHIELD'S rich consistency uniformly covers the textured profile of various substrates, forming a permanently flexible monolithic membrane, providing protection from normal weathering, aging and ultraviolet exposure.

COLORS

SUNSHIELD is available in standard White or Gray. All other colors are custom matched by UNITED for the specific application. Color chips or samples must be furnished to UNITED for all custom colors.

PACKAGING & MIXING

SUNSHIELD is a single component, ready-to-use material available in 5-gallon (19 liter) pails and 55-gallon (209 liter) drums.

SUNSHIELD may appear well mixed, but upon standing will settle into a two-stage suspension. Thoroughly mix the contents of all containers using a power mixer for a minimum of five (5) minutes prior to application. For 5-gallon (19 liter) pails, use a 3" (7.5 cm) minimum diameter mixing blade. For 55-gallon (209 liter) drums, a 6" (15 cm) minimum diameter blade is recommended.



TYPICAL PROPERTIES

- Solids by Weight:**
66% (± 2) [ASTM D1644]
- Solids by Volume:**
51% (± 2) [ASTM D2697]
- Surface Dry Time for Foot Traffic Resistance:**
4 hours at 75°F (24°C), 50% R.H.
White at 16 wet mils (406 microns)
2 hours at 75°F (24°C), 50% R.H.
Gray at 16 mils wet (406 microns)
Required times will increase @ lower temperatures and/or higher humidities
- Tensile Strength:**
200 psi (± 20)
[ASTM D412]
- Elongation:**
180% (± 20)
[ASTM D412]
- Hardness:**
60 to 70 Shore A
[ASTM D2240]
- Permeance:**
2.7 US perms at 22 dry mils
[ASTM E96]
- Low Temperature Flexibility:**
Passes 180° flex over ½ mandrel @ -5°F (-21°C) [Federal Test Method No. 141a-6221]
- Temperature Limits For Normal Service Conditions:**
0°F to 200°F (-18°C to 39°C)
- Fire Resistance:**
UL 790 Class "A" classified system over spray-applied polyurethane foam on **non-combustible** decks, Class "B" over **combustible** decks.

WARRANTY

UNITED COOL ROOF SYSTEMS 10-Year Standard Warranty is a guarantee that the SUNSHIELD coating, when properly applied over sprayed-in-place polyurethane foam, or other acceptable roof substrates. This Warranty is provided by UNITED at **no cost**. Refer to Application Instructions for minimum dry film thickness required.

SPRAY EQUIPMENT

SUNSHIELD has been applied utilizing many different brands, types and sizes of airless or conventional spray equipment. Airless spray equipment is best suited, with the following minimum recommendations:

PUMP: 1 gallon per minute (3.8 l/m) output and 2,000 psi (13,790 kPa) pressure capability.

GUN: Any airless hand gun compatible with pump used.

SCREEN SIZE: Filter screens should be 30 mesh or larger.

TIP SIZE: A reversible self-cleaning tip with orifice size of .027" to .044" (.69 to 1.1 mm) and fan angle of 40° to 50°.

FLUID HOSE: Use ¼" (6 mm) minimum inside diameter nylon high-pressure hose for lengths up to 100 ft. (26 m) from pump. From 100 ft. to 200 ft. (26 to 51 m), use ⅜" (1 cm) inside diameter hose added to pump side of existing ⅜" (1 cm) hose to maintain pressure and delivery. Over 200 ft. (51 m) use ½" (1.3 cm) inside diameter hose.

APPLICATION INSTRUCTIONS

SUNSHIELD may be applied by brush, roller, conventional or airless spray equipment. Airless spray is the preferred method. Brush or roller may be used for touch-up and edging work, or for small areas that are not practical for spray application.

SUNSHIELD shall be applied in two or more coats to achieve a minimum total dry mil thickness of approximately 16 (406 microns), depending on the substrate. This will require 2 to 4 gallons per 100 sq. ft. (.4 to 1.6 l/m²) depending upon surface texture. SUNSHIELD should not be applied at more than 24 wet mils (610 microns) in any one coat. Additional coats may be applied as soon as the previous coat is dry enough to allow the applicator to walk on. When two coats are utilized, it is recommended that Gray be used as the first coat, thus making it easier to visually control the application of the second coat in White. Initial cure to achieve resistance to rain or dew will normally take several hours, depending on temperature and humidity.

SUNSHIELD shall extend up and over all roof substrates on vent pipes, parapets and other protrusions to terminate a minimum of 3" (7.5 cm) above the substrate, creating a self terminating flashing. Extend coating up and under all counter-flashings, where utilized.

The sprayability of SUNSHIELD will depend on the combination of proper equipment and temperature of the coating at time of application. SUNSHIELD in the container is very cohesive and difficult to spray at **material temperatures** below 60°F (16°C). Thinning or reducing the mixture is not recommended. Addition of water reduces the rich thixotropic nature of SUNSHIELD and decreases its ability to achieve a heavy film build with excellent vertical hold. Use water and **UCC Cleaner** to thoroughly flush equipment. Purge the water from the system using Mineral Spirits or Cellosolve solvent. Leave the solvent in the lines and equipment until next use. It is not recommended practice to leave SUNSHIELD in the pump or hoses.

LIMITATION & PRECAUTIONS

SUNSHIELD should not generally be used over cold storage tanks or buildings where a vapor barrier coating is required. SUNSHIELD shall not be used for interior applications in place of a thermal barrier.

SUNSHIELD will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store unless protection from freezing is available.

Do not apply SUNSHIELD at temperatures below 50°F (10°C), or when there is a possibility of temperatures falling below 32°F (0°C) within a 12-hour period after application. SUNSHIELD requires 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, fog or freezing temperatures occur.** Do not apply in the late afternoon if heavy moisture condensation can appear during the night.

For specific information on safety requirements, refer to OSHA guidelines and SUNSHIELD Material Safety Data Sheet.



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