

SiliconEx 500 is SolarEx's Premium Liquid Silicone Roof Coating. **SiliconEx 500** is 100% Silicone, solvent-free, single component, moisture cured liquid roof coating. It cures to form a highly elastic, impermeable, and monolithic membrane. **SiliconEx 500** creates a shield that is ideally suited for flat roofs and it protects simultaneously against ponding-water and acts as Cool Roof coating by reflecting UV & sunlight. It is specially designed to maintain maximum reflectivity of sunlight even as it ages.

KEY FEATURES

- High Solids: Can cover with one-coat application
- Extends roof life and reduce maintenance costs
- Highly reflective **Cool Roofing** helps lower utility bills
- Strongest adhesion with almost all types of substrates
- Extremely durable, weather resistant and **UV resistant**
- Extremely easy application by brush, roller or airless spray
- Ponding Water Protection: Withstands permanent ponding water without affecting cured material characteristics.
- Breathable: Reduces blistering and the possibility of damage to the substrate caused by entrapped water.

Applicable Substrates:

SiliconEx 500 can be directly applied to almost all types of substrates such as metal, concrete, wood or on top of any existing coatings such as, TPO, EPDM, Singly Ply membrane, Smooth or Granulated membrane.

Preparation:

The surface must be clean from loose particles, dirt, dust, oil, etc. **SiliconEx 500** should generally be applied on dry and sound surfaces. Old coatings should ideally be removed if they are loosely held on to the existing surface. The substrate should be pressure washed prior to coating application. A moisture content of less than 5% is generally recommended in concrete surfaces. All joints, cracks and extrusions should be sealed using **SealEx 510 Mastic**-100% Silicone Sealant or **SealEx Tape** prior to the application of **SiliconEx 500**. EPDM roofs may require aggressive power washing and need to be cleaned twice to remove all surface contamination

Priming:

SiliconEx 500 can mostly be applied without the use of a primer. However, it is recommended to use **BleedEx 400** as bleed-block primer on top of bitumen surfaces or Anti-Rust (Rust Converter) primer for rusted metal sheets. Generally, an adhesion test is recommended before application to determine the requirement of a primer to improve adhesion.

Mixing:

Mix well prior to the use, as coating may settle during storage. Mixing can be done using a drill or a mixing paddle. Use a clean and min. 3" (7.5 cm) diameter mixing paddle or hand mix with a suitable and clean paddle until consistent viscosity is achieved. Do not thin the product.

TECHNICAL PROPERTIES

Characteristics	*Values
Density	1.36 g/cm ³
Solids by Weight(ASTM D 1644)	94%
Solids by Volume(ASTM D 2697)	94%
Viscosity(ASTM D 2196)	4100±1000 cp
Tensile Strength(ASTM D 2370)	230 psi
Elongation at Break(ASTM D 2370)	250%
Hardness Shore A(ASTM D 2240)	40 – 50
Water Vapor Permeability(ASTM E 96)	5 perms
Reflectivity (initial)	87
Reflectivity (3-Year Aged)	0.72
Emissivity	90
SRI	110
VOC	8 g /L
Touch Dry (73°F & 75% RH)	70 – 90 min

*Above values are nominal test values

Application:

SiliconEx 500 can be applied using nap roller, soft brush, or airless spray gun. **SiliconEx 500** can be applied in single coat application, however, in case of second coat application, it can be applied between 6 - 24 hours from first coat application. Drying time is significantly affected by the ambient temperature and humidity. Use a 1/2" (12 mm) nap roller, cover-dip roller directly into pail and apply. Alternatively pour product onto flat roof surface and roll out evenly, or spread with a squeegee then immediately back roll for smooth finish (do not over roll). Airless Spray can also be done using hydraulic pump with pressure from 5000 to 7000 psi (345 to 485 bar) and tip size can be 645 (30 cm fan with 1.14 mm orifice). Mineral Spirits can be used to clean the spraying equipment after use. Textured surfaces may require additional coats to achieve a minimum 30 mils (760 µm) dry film thickness. To make walkways, coarse quartz particles with round edges can be sprinkled on top of freshly applied topcoat. **SiliconEx 500** is 100% UV and color stable.

Weather Conditions:

Rainy weather should be avoided. It is recommended to carry out **SiliconEx 500** application between temperatures 40°F to 120°F (5°C to 50°C) and relative humidity lower than 75%

Coverage:

Coverage of 1.5 - 2.5 gal/square (0.6 to 1 l/m²) is recommended and can be achieved in one or two coats. However, consumption may vary depending on surface texture, porosity, and application specification, and additional coats may be required. Minimum recommended DFT is 22 mils (560 µm).

Curing time

Tack Free in 70-80 min, Fully Cures within 12 to 24 hours depending on weather conditions.

Shelf life:

Minimum 24 months from the date of production in sealed containers (when stored in dry, cool, and covered area)

Colors:

White, Gray, Tan, Yellow, Custom color by order

Packaging Size:

5 Gall, 55 Gall

Slip Hazard Warning:

Silicone roof coatings may create a slippery surface during application, curing, and when wet. Restricted access, fall protection, and appropriate safety measures are required at all times. Failure to follow proper safety practices may result in serious injury.

Storage & Handling:

Protective clothing, gloves, and eyewear should be used during application. Do not heat the pails or place the pails near the heated surface. Keep the pails sealed, when not in use. Material must be stored in a shaded area with temperatures between 50°F and 85°F (10°C and 30°C). Storage at temperatures outside these conditions or at relative humidity over 65% will reduce the shelf life. Ensure to tightly seal the pail after opening and when not in use. Opened pails must be used within 3-5 days after opening. If a skin forms at the top of opened pail, remove prior to mixing material. When transporting this product, ensure that the lid and openings are tightly sealed. Do Not allow products to tumble or shift as this may cause leakage to occur. Do not transport on passenger seats or inside the passenger compartment of any vehicle.

Rated Product ID #: 1368-0002			
	Smooth	Rough	
Solar Reflectance	Initial / Aged 0.85 / 0.72 *	Initial / Aged 0.72 / 0.69 *	
Thermal Emissance	Initial / Aged 0.89 / 0.89 *	Initial / Aged 0.90 / 0.91 *	

The ratings above are subject to CRRC rating program conditions, requirements and limitations. Visit coolroofs.org for important information and disclaimers about CRRC rating requirements and limitations. For the purposes of a CRRC rating, a rough substrate is defined as a surface that is equally coarse or coarser than a new (i.e., unweathered) #11 granulated modified bitumen sheet.

^{*}CRRC Rapid Ratings: Interim laboratory-aged values that simulate naturally-aged values and will be replaced by the measured three-year naturally-aged values upon completion of the weathering process.

Warranty & Limitations of Liability:

We warrant that this product shall be free of any defect in material at the time of purchase. This warranty does not extend to any defect or failure caused by misuse and/or incorrect application. **LIMITATION OF LIABILITY:** In the event of a defect or failure falling under this warranty, Buyer's sole remedy shall be the refund of the purchase price or replacement of the defective material, at Seller's option. Under no circumstances shall Seller be liable for any losses or damages caused by this product, whether direct, indirect, special, incidental, or consequential damages, whether based on contract or any other legal theory.

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