Si-COAT® 460RC™

Silicone Roof Coating

Technical Data Sheet

+KEY FEATURES

- **Weatherproofing Protection:** Superior resistance against ultraviolet and long-term weathering protection.
- **Cool Roof:** Choosing White Color and IR Reflectant pigments produce excellent cooling effect, color stability and chalk resistance.
- **Ponding Water Protection:** Withstands permanent ponding water.
- **Breathable:** Reduces blistering and the possibility of damage to the substrate caused by entrapped water.
- **Versatile application:** Can be applied using brush, roller, squeegee, airless spray. Wide temperature application range.
- **Roof System:** Can be used with CSL Sealants and other materials to construct an impervious membrane over complex surfaces.
- **Si-COAT® 460RC™** is a 100% silicone, RTV moisture cure, waterproof roof coating which forms a monolithic barrier to the effects of degradation caused by normal weathering, aging and ultraviolet exposure. **Si-COAT® 460RC™** has excellent durability, color stability and chalk resistance.
- **Si-COAT® 460RC™** coating can be applied using brush, roller, squeegee or airless spray.

APPROVALS & CERTIFICATIONS

- Cool Roof Coating Council (CRRC) rated Product ID# 1368-0001 (white only)
- NSF Protocol P151 Health Effects from Rainwater Catchment System Components (white only)
- UL Certification # R40482
- Underwriters Laboratory: TGFU.R40482 and TGFUC.R40482
- ASTM D6694 Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems.

PRODUCT CHARACTERISTICS AND PRACTICAL INFORMATION

Volume Solids	71%
Typical Thickness Application Rate	20 mils (508 microns) dry film thickness (DFT)*

*Coating can be applied between 1-3 coats at a maximum of 40 mils DFT.

Approximate Theoretical Coverage:

DFT	18.0 mils (457 µm)	22.0 mils (559 µm)
sq. ft/US gal	84	69
sq. m /L	2.1	1.7

Allow appropriate loss factor:
Practical Coverage = Theoretical Coverage x [100% - Loss%].

Method of Application: Airless spray, squeegee, brush or roller.

Application Temperature Range: 41 to 140°F (5 to 60°C)

Drying Time:

Skin-over Time	66 minutes*
Dry/Cure/Recoat Time	2 to 24 hours*
Full Physical Characteristics	30 days*

**At standard conditions [77°F (25°C) and 50% relative humidity].*

PHYSICAL PROPERTIES

(Typical properties - values not to be used as specifications)

Uncured	
Specific Gravity	1.22
Appearance	Thick Paint
Viscosity	3,600 ± 1,000 cP
Cure System	Neutral, moisture cure
Cured at standard conditions* for 7 days	
Hardness (ASTM D2240, Shore A)	51 points
Initial Tensile Strength (maximum stress) @ 23°C per ASTM D2370/D6694/D6694M- 15	391 psi
Initial Tensile Strength (maximum stress) @ -18°C per ASTM D2370/D6694/D6694M- 15	355 psi
Initial Percent Elongation (break) @ 23°C per ASTM D2370/D 6694/D6694M- 15	302%
Initial Percent Elongation (break) @ -18°C per ASTM D2370/D 6694/D6694M- 15	258%
Initial Percent Elongation (break) @ -18°C per ASTM D2370/D 6694/D6694M- 15	24 lbf/in
Tear Resistance (ASTM D624 Die B)	24 lbf/in
Adhesion to SPF per ASTM D903/D 6694/ D6694M- 15	3.76 pli
Low Temperature Flexibility @ -26°C per ASTM D522/D 6694/D 6694M- 15 min. Pass (around a 1/2" mandrel)	Pass
Permeance per ASTM E96/E96M (Procedure B water inverted) D6694/D 6694M- 15	3.93 perms

CRRC ASTM D7897-18 Standard Practice for Laboratory Soiling and Weathering of Roofing Materials to Simulate Effects of Natural Exposure on Solar Reflectance and Thermal Emittance		
	Initial	
	C1549-16	0.857
	C1371-15	0.90
	E1980-11(2019)	108.2
	Soiled	
	C1549-16	0.721
	C1371-15	0.90
	E1980-11(2019)	88.8

Temperature Stability:	-60 a 200ºC (-76 a 392ºF)

**At standard conditions 77°F (25°C) and 50% relative humidity.*

COLORS

Si-COAT® 460RC™ is available in White, Tan, Light Grey and Dark Grey. For special projects, other colors are available using custom color matching at an additional charge. Please contact CSL Silicones for assistance. Terms and conditions may apply.

SURFACE PREPARATION & CLEANLINESS

All surfaces to be coated should be free of dirt, dust, chalking paint, mortar spatter, all loose rust, all loose mill scale, old caulking, grease, oil, release agents, curing compounds, laitance and other foreign matter including frost. Surfaces should be power washed with appropriate detergent and rinsed prior to coating.

Roof surfaces need to be clean and dry. A 20 mil thickness will skin over in about 60 minutes and have sufficient strength to walk on for application of a second coat in about 4 to 6 hours.

APPLICATION

Mixing: Si-COAT® 460RC™ is supplied as a one-part coating (no component mixing necessary). **Mix by a powered agitator (300 – 400 rpm) for a minimum of 5 minutes,** to ensure an even consistency of coating is obtained without air in suspension.

Application: The temperature of the surface to be coated should be between 41 and 120°F (5 and 60°C) and environmental temperature should be at least 5°F (3°C) above the dew point prior to and during application.

When working with **Si-COAT® 460RC™** in high humidity and/or high temperature environments, it is recommended to use a pail lid adapter fitted with an agitator. This will prevent the product from skinning over and curing in the pail during application.

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It is recommended that **Si-COAT® 460RC™** be applied using an airless sprayer; however, brush, squeegee or roller are also suitable methods of application. It is necessary to apply at a rate that will achieve a minimum of 20 mils (508 µm) DFT. **Si-COAT® 460RC™** can be applied in a single coat withstanding blistering and providing superior adhesion. Roller and brush application will require multiple coats to achieve desired DFT even if the coverage is adequate.

Surface finish is dependent on application method. Avoid using a combination of application methods whenever possible. Superior aesthetic appearance will be obtained with airless spray application.

Always perform an adhesion test patch over smooth substrates, existing coated roofs and metal roofs. If adhesion result test is not satisfactory for the project please contact CSL Silicones for compatible primers and repeat test.

Thinner: Not recommended.

Cleaner: Naphtha or Odorless Mineral Spirits.

Work Stoppages & Restarts: Work stoppages are not recommended with only partial utilization of a container of **Si-COAT® 460RC™**. If work must stop after only a portion of a container of **Si-COAT® 460RC™** is used, seal to minimize air and moisture contact with the coating by covering the surface of the coating with a sheet of polyethylene film, then reseal the container to be airtight.

Upon reopening the container to restart work, peel back the polyethylene film. If curing of the coating has occurred, use a utility knife to cut the cured coating away from the wall of the container. Peel away the cured layer of coating to expose fresh coating underneath.

Clean-up: Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with **Si-COAT®** equipment cleaner, naphtha or mineral spirits.

Fully cured coating is environmentally benign (will not harm) and is suitable for landfill disposal. However, always check local environmental regulations before disposal.

SYSTEMS COMPATIBILITY

Although no primer is needed prior to applying **Si-COAT® 460RC™** to most common substrates, it is recommended to do a quick field adhesion test prior to application.

Si-COAT® 460RC™ is compatible with with all CSL neutral cure sealants (including CSL 463 Silicone Roof Sealant, CSL 464 Silicone Self-Leveling Roof Sealant and CSL 465 Silicone Flashing Sealant). Please contact CSL Silicones for additional compatibility with after-market roof products.

Si-COAT® 460RC™ has excellent tolerance to airborne chemical exposure.

Si-COAT® 460RC™ is not for use on 3-tab asphalt or architectural shingles, and not for use in contact with potable water. Multiple coats, sealants and combination of other compatible roof materials may be required to create a seamless membrane.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given in this document. See Safety Data Sheet (SDS) and the container(s). All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards & regulations.

Slip warning: Use extreme caution when working or walking on silicone coated surfaces. Surface is extremely slippery and can result in fall hazard with injury or death.

PACKAGING

Size (unit)	Product Volume	Net Weight
2.5 US gal pail	2.5 US gal / 9.5L	25.3 lbs / 11.5kg
5 US gal pail	5.0 US gal / 18.9L	50.7 lbs / 23kg
55 US gal drum	55 US gal / 208.2L	557.7 lbs / 253kg

**For availability of other package sizes, please contact CSL Silicones Inc.*

STORAGE

Shelf Life: 12 months from date of manufacture in the original unopened container below 90°F (32°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat or ignition. May be stored below freezing.

NEMO|cert. F2153577J

NSF Protocol P151
Health Effects from Rainwater Catchment System Components

MIAMI-DADE COUNTY APPROVED

Florida dbpr Department of Business & Professional Regulation

CLASSIFIED C UL US

CEMENTS AND COATINGS FOR ROOFING SYSTEMS
AS TO EXTERNAL FIRE EXPOSURE
SEE UL DIRECTORY OF PRODUCTS CERTIFIED FOR CANADA
AND UL ROOFING MATERIALS AND SYSTEMS DIRECTORY
< R40482>

CRRC COOL ROOF RATING COUNCIL

Rated Product ID #: 1368-0001

	Smooth	Rough
	Initial / Aged	Initial / Aged
Solar Reflectance	0.85 / 0.71	0.74 / 0.69*
Thermal Emittance	0.90 / 0.89	0.91 / 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.

Disclaimer
The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this document without first obtaining written confirmation from CSL Silicones Inc. as to the suitability of the product for the intended purpose does so at his/her own risk. The information contained herein has been prepared in good faith to comply with applicable federal and provincial (state) law(s). However, no warranty of any kind is given or implied and CSL Silicones Inc. will not be responsible for any damages, losses or injuries that may result from the use of any information contained herein. While CSL endeavors to ensure all advice it gives about the product (whether in this document or otherwise) is correct, we have no control over either the quality or condition of the substrate or the many factors affecting the use and ap-plication of the product. Therefore, unless CSL specifically agrees in writing to do so, it does not accept any liability whatsoever or howsoever arising for the performance of the product, or for any consequential loss or damage arising out of the use of the product. Any warranty, if given or specific Terms & Conditions of Sale are contained in CSL's Terms & Conditions of Sale, a copy of which can be obtained upon request. The information contained herein is liable to modification from time-to-time in light of experience and CSL's policy of continuous product improvement. It is the user's responsibility to check that this document is current prior to using the product. This document must not be used for specification writing.

CSL Silicones Inc.
144 Woodlawn Rd. W.
Guelph, ON N1H 1B5
Canada

T +1 519.836.9044
TF + 1 800.265.2753
cslsilicones.com

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