

## SMARTCOAT™ 450 HIGH SOLIDS SILICONE COATING

WHITE

### Product Information



**Description & Use:** SMARTCOAT™ 450 High Solids Silicone Coating is a 100% silicone based, solvent free, single part roof coating. SMARTCOAT 450 creates a membrane that is vapor permeable, adaptive to temperature extremes, UV resistant, watertight and weatherproof. This product exhibits outstanding ponded water resistance for direct bond over architectural surfaces such as low-sloped or flat roofing systems, vertical walls, masonry, granulated BUR/Mod-Bit, granulated APP, concrete, metal, single-ply membranes and spray polyurethane foam (SPF) systems. This product may be used to re-coat existing silicone roof coatings and existing acrylic roof coatings. Refer to published SMARTCOAT specifications for installation guidelines. SMARTCOAT 450 meets or exceeds ASTM D 6694.

**Coverage:** 1.5-2.5 gallons per 100 square feet.

**Precautions:** SMARTCOAT 450 High Solids Silicone Coating can be applied over properly prepared surfaces that exhibit ponded water, however, the National Roofing Contractors Association (NRCA) considers ponding water an undesirable nonstandard roofing practice and recommends that all roof systems be designed and built to ensure positive drainage. (See the NRCA Roofing and Waterproofing Manual). This product may be used to re-coat existing silicone roof coatings and existing acrylic roof coatings. Refer to manufacturers specification for application procedures, roof preparation, installation guidelines. Contact CertainTeed Commercial Roofing Technical Department for any specific questions regarding the application of this product.

### Product Application

1. Clean roof surface thoroughly with SMARTCOAT 100 Roof Wash. Surface must be free of dirt, dust, oil, grease, wax, rust, chalky or loose paint, mildew and any other surface contamination that may inhibit adhesion. Use wire brush to remove rust and scale from metal. Surface must be clean and dry, free of moisture both on and beneath the surface before applying SMARTCOAT PRIMER, MASTIC (if applicable) or COATING.
2. SMARTCOAT 450 is intended as a direct-bond roof coating. However, if adhesion test indicates primer is required, prime surface with SMARTCOAT 210 Universal Primer. When applying on a smooth or granulated modified bitumen or built-up-roof, though most granulated surfaces do not require primer for adhesion, SMARTCOAT 200 Asphalt Bleed Blocker will prevent top-surface yellowing from migrating bituminous oils.
3. Carefully inspect entire roof and seal/repair all holes, cracks, tears or breaks with SMARTCOAT 350/370 Mastic/Sealant prior to coating. SMARTCOAT 350/370 can usually be coated within 24-36 hours. If solvent-based roofing cement is used to repair, it must cure for 30 days to avoid any bleed through.
4. Product may separate after shipping and storage, though it may still look mixed. Mechanically mix COATING before using, do not overmix. Do not thin product with solvent or other solutions. Apply only at temperatures between 40°F and 110° and no threat of rain during application window or at least 1 hour after application has ended.
5. Apply SMARTCOAT 450 at a minimum rate of 1.5 gallons (24 wet mils) per 100 square feet. Apply with a heavy-duty roller or suitable spray equipment. Spray application\* is preferred as it will yield a smoother surface that will be less likely to pick up dirt. No more than 2.5 gallons per 100 square feet should be applied in a single-pass or application. The coating will be dry-to-touch in 2-8 hours and should be completely cured and a walkable surface in no more than 72 hours depending on temperature and humidity.
6. Clean tools with mineral spirits or paint thinner, if coating has dried. Cleanup of spray equipment containing uncured material may be accomplished by flushing with VM&P Naphtha or Rule 66 Mineral Spirits. SMARTCOAT 450 cures by reacting with moisture and should not be left in spray guns, pump equipment and/or hoses for prolonged periods unless equipment contains moisture lock hoses, fittings, and seals. Equipment without these components will transmit sufficient moisture vapor to gradually form cured material on hose walls and at unsealed connections potentially causing an increase in operating pressure and material flow restriction.



\*Due to the viscosity of the material, a high-pressure airless paint pump capable of producing a minimum of 3500 PSI at the spray gun head should be used. The pump should have a minimum of 3 gallons per minute

## Product Application (cont'd)

output and be fed by a 5:1 transfer pump to prevent cavitation. Always use components rated for pump pressure. Hoses should be BUNA-N jacketed for prevention of moisture contamination. Hoses should have a minimum I.D. of 3/4" and an adequate working pressure. The spray gun should be high pressure (5000 PSI) with reverse-a- clean spray tip, having a minimum orifice of .030 and a 50° fan tip. DO NOT USE hose that has been used for acrylic coatings or other waterborne coatings because the liner absorbs moisture and initiates the silicone cure process.

For more information, see published SMARTCOAT specifications at [www.certainteed.com](http://www.certainteed.com)

## Physical Properties

<b>Color</b>	White, Light Grey, Dark Grey, Santa Fe Tan and Black*
<b>Packaging</b>	5G, 55G
<b>Maximum VOC</b>	<50 G/L
<b>Solar Reflectivity (Initial/Aged)</b>	0.88/0.80
<b>Thermal Emissivity (Initial/Aged)</b>	0.90/0.90
<b>Tack-Free</b>	Less than 8 hours (RH dependent)
<b>Full Cure</b>	8-72 hours
<b>Tensile Strength</b>	>240 psi @ 73°F
<b>Elongation</b>	>270% @ 73°F
<b>Tear Resistance</b>	>23 lbf/in @ 73°F
<b>Solids by Volume</b>	>95%
<b>Solids by Weight</b>	>96%
<b>Permeance (Method B)</b>	3.4 perms
<b>Shelf Life</b>	18 months (un-opened containers, stored between 35°-75°F)

\*#450 Black is made-to-order, contact for pricing and minimum order

**Storage & Disposal:** Store in cool, dry conditions in well-sealed receptacles- can be stored in unheated warehouses without the risk of freezing. Shelf life is 18 months from date of manufacture when properly stored. Dispose of contents/container in accordance with local/regional/national/international regulations.

For more information, refer to the Safety Data Sheet at [www.certainteed.com](http://www.certainteed.com)

## First Aid

**WARNING:** Combustible liquid. May cause an allergic skin reaction. May cause damage to the nervous system through prolonged or repeated exposure. Do not breathe dust/fume/gas/mist/vapors/spray. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center/doctor. Do NOT induce vomiting. Keep away from heat/hot surfaces/sparks/open flames/other ignition sources. Take precautionary measures against static discharge. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Use only in well ventilated areas. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. In case of fire use CO<sub>2</sub>, extinguishing powder or water spray.

## Technical Assistance and Services

CertainTeed provides technical assistance in the product selection, specification and application guidelines for all CertainTeed commercial roof systems. Field representatives are available for consultation in each region.

For more information, contact CertainTeed Commercial Roofing Technical Services at 800-396-8134 ext. 2 or [rpg@saint-gobain.com](mailto:rpg@saint-gobain.com)

## Warranties

CertainTeed offers SMARTCOAT Limited Warranties, SMARTCOAT NDL Limited Warranties and CertainTeed Integrity Roof System Limited Warranty/NDL Limited Warranty SMARTCOAT Extensions, ranging from ten (10) to twenty (20) years to SMARTCOAT Approved Applicators and Silver/Gold Star Contractors.

For more details, please see the SMARTCOAT Warranty Overview on [www.certainteed.com](http://www.certainteed.com)

NOTICE TO CUSTOMER: FOR PROFESSIONAL USE ONLY/DO NOT THIN. WE WILL NOT ASSUME ANY LIABILITY FOR THE RESULTS OF CUSTOMER'S USE OR A CUSTOMER'S INABILITY TO PROPERLY USE OR APPLY THIS PRODUCT. CERTAINTEED WILL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. CONTACT CERTAINTEED FOR ALL DETAILS OF LIMITED WARRANTY COVERAGE, AS THIS IS THE EXCLUSIVE WARRANTY FROM CERTAINTEED AND IN LIEU OF ANY AND ALL OTHER WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR USE AND FITNESS FOR A PARTICULAR PURPOSE.



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