

SEALGUARD VFI®-990 HIGH SOLIDS SILICONE

SEALGUARD VFI-990 High Solids Silicone is a single-component, moisture-cure, fluid applied roof coating. It can be applied in a single pass and cures to create a seamless film on most roofing substrates. Its water-resistant capabilities allow it to withstand ponding water on surfaces with a slope equal to or less than 1/12. Rather than replacing your old and damaged roof, VFI-990 is a great candidate for commercial roof restoration projects. It will protect your flat or low-slope roofing system for years with minimal maintenance and repair.

- Single-pass material helps you save on time and labor costs
- Superior brightness maximizes UV reflectance, reducing energy use and energy bills
- 100% silicone nature won't allow mold, mildew, and algae to attack the roof surface
- Prevents accelerated roof erosion, deterioration, and failures from ponding water exposure
- Standard coating for use over most substrates; uses less material for required dry film thickness
- Lower VOC content that meets and exceeds EPA standards

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Tensile Strength	ASTM D412	426 psi
Elongation	ASTM D412	228%
Final Elongation after 5000 Hours	ASTM D412	187%
Tear Strength	ASTM D624	29 pli
Aged Solar Reflectance of White	CRRC 0948-0013	0.68
Aged Thermal Emittance of White	CRRC 0948-0013	0.90
Permeance	ASTM E96	8.8 perms
Low Temperature Flexibility	ASTM D522	Pass
Resistance to Wind Driven Rain	TT-C-555B	Pass

LIQUID PROPERTIES	TEST METHOD	TEST RESULTS
Solids by Weight	ASTM D1644	96%
Solids by Volume	ASTM D2697	93%
Liquid Density	N/A	11.26 lbs/gal
Specific Gravity	N/A	1.24 g/mL
Flash Point	N/A	187°F
Viscosity	ASTM D2196	5000 cps
Tack Free Time	N/A	1-2 hours @ 75°F, 50% Rh
Cure Time	N/A	2-4 hours @ 75°F, 50% Rh
Recoat Window	N/A	2-48 hours @ 75°F, 50% Rh
VOC	N/A	46 g/L



Cements and coatings for roofing systems as to an external fire exposure only 84GM

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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EQUIPMENT

The coating can be applied to the surface with airless spray equipment, industrial paint brushes, or nap rollers. When spraying, use equipment equivalent to:

- Graco GH 933 or DutyMax GH 675DI are capable of 1.5-2.5 gpm and a minimum constant pressure of 5,000 psi. We also recommend spraying with Graco Xtreme-Duty ½-inch or ¾ inch hoses with ⅜ inch whip hoses and Graco XTR-7 Airless Spray Guns with minimum .030 sized tips. The Graco 5:1 Monarch Transfer Pump should be used with drums.
- WIWA HERKULES GX, model 333/075, produces a flow rate per cycle of 275 cm³ or 9.3 fl oz, a pressure ratio of 75:1, and max inbound air pressure of 6.5 bar or 94 psi.
- Hennes-Johnson Model 5320 Silicone sprayer with a trigger gun capable of providing 5,000 psi of constant pressure at 3 gpm with ¾ or ½ inch nylon lined hoses and a whip hose.

SURFACE PREPARATION

Remove dirt, leaves, debris, and other materials detrimental to adhesion with a broom. Use a pressure washer and VFI-1009 Cleaning Detergent to clean areas containing animal fats, oils, and grease. Rinse the surface and allow it to dry.

Gaps and seams should be tight and flush, and any additional repairs should be made. Tighten and replace loose or backed-out fasteners with oversized fasteners. VFI recommends applying a primer like VFI-#11 9:1 Epoxy Primer to the roof and SEALGUARD VFI-993 Silicone Flashing Grade on seams, penetrations, and protrusions before coating.

MIXING

Mix the coating until uniform before use. Mix times may vary depending on volume and mixing method.

APPLICATION REQUIREMENTS

Apply VFI-990 over the prepared surface at a minimum rate of 1.5 gallons per square to create a monolithic layer on the roof. Check specifications for required wet and dry film thickness. VFI-990 should only be applied when the surface and ambient temperatures are between 40°F - 120°F and when existing and forecasted weather conditions permit quality application. Bring the material to a minimum of 65°F before use. Some substrates will need additional strength by applying the coating with polyester fabric reinforcement. Wait 24-72 hours for the coating to fully cure before you allow limited foot traffic on approved walking areas.

CLEANING

Do not use water to clean application tools and equipment. If spraying, do not leave VFI-990 inside the spray equipment. It will cure with moisture and stick to hose walls and unsealed connections. Clean the pump equipment, spray guns, and hoses with chemically dry mineral spirits. Recirculate mineral spirits through the lines until the uncured coating is removed.

STORAGE/SHELF LIFE

The material shelf life is 12 months from the date of manufacture. Store in a dry, temperature-controlled space in sealed and unopened containers between 60°F - 90°F. Opened containers can be resealed with a nitrogen purge, but it will ultimately shorten the shelf life of the product.

PRECAUTIONS

VFI-990 should not be applied if the temperature is below 40°F and decreasing or if rain and other moisture contaminations are present. Avoid breathing in vapors or repeated skin contact. Do not thin or add foreign material to the product. See Safety Data Sheet for complete safety data.

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