Unisil High Solids Silicone Data Sheet

Unisil HighSolids Silicone Roof Coating

A versatile, high-solids silicone roofing solution

Description:

GAF Unisil High Solids Silicone Roof Coating is a high-solids, moisture-cure silicone coating that provides protection against weather elements, UV rays, and leaks due to ponding water for a variety of substrates.[1]

Features and Benefits:

- **Can be applied in a single coat**[1]
- **Provides protection** against leaks due to ponding water
- **97% average solids by volume** content allows for more coating applied in a single pass
- **Silicone elastomers** maintain properties in extreme temperatures

Substrate Preparation:

- **Substrate** should be dry, clean, and free from oil, grease, and other contaminants
- **Pressure-wash** to remove all dust and debris, and allow to dry
- **Examine substrate** to receive new roofing and conduct test patches to verify adhesion of coating prior to start of work
- **Check for any damaged roof membranes**, including all flashings and penetrations, and repair before coating application commences
- **Priming** of substrate may be required[2]

General Application Method:

- **Read complete application instructions** at gaf.com before using this product
- **May be applied by** brush, roller, or airless sprayer
- **Apply evenly** at the rate specified for the substrate being coated and the warranty or guarantee coverage desired[2]
- **Additional coats may be applied** as soon as the previous coat is dry enough to walk on and should be applied perpendicular to the previous coat to ensure proper coverage
- **Total coverage** is dependent on the substrate. Rough or porous substrates may require more coating.

Spray Application:

- **Apply product with an airless sprayer,** covering the surface at an even rate. Use an airless spray pump with a 3 gallon-per-minute (11 L/minute) output and 3,500 psi (24,138 kPa) pressure capability, fed with 5:1 transfer pumps.
- **Use a reversible,** self-cleaning tip with orifice size 0.030" (0.76 mm) and a fan angle of 50°. Filter screens should be 30 mesh or larger. Use a ½" (12.7 mm) minimum inside diameter hose.
- **Apply subsequent coats** as soon as the previous coat is completely dry.

Codes and Compliances:

▪ **FM Approved**[3]	FM APPROVED
▪ **Refer to UL Product iQ for actual assemblies**	CLASSIFIED UL
▪ **CRRC Rated (White only)**	

- Meets the requirements contained in ASTM D6694 "Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems."[3]
- UL Listed to ANSI/UL 790 Class A. Refer to UL Online Certification Directory for actual assemblies.[3]

Safety and Handling:

- For specific information on safe handling of this material, refer to the Safety Data Sheet (SDS)
- FM Approved. Refer to FMapprovals.com/RoofNav for actual FM- Approved assemblies

[1] Refer to the *UNITED COATINGS™ LIQUID-APPLIED ROOFING Application & Specifications Manual*, available at gaf.com, for acceptable substrates
[2] Refer to gaf.com for applicable coverage rates
[3] Refer to FMapprovals.com/RoofNav for actual FM Approved Assemblies

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Mixing:

- **Some settling of material** may have occurred during shipment and storage
- **Containers that have been stored for any length of time** may develop a skin/film on top of the coating; this should be removed prior to mixing
- **Take care not to incorporate air into the product**
- **Mix prior to use** with a ¾-horsepower or greater mixer with a blade capable of uniformly mixing the entire container
- **Use immediately** to avoid trace amounts of moisture from causing a reaction in the container
- **For 5-gallon** (18.9 liter) pails, use 3" (76 mm) minimum diameter mixing blades. For 55-gallon (208 liter) drums, use 6" (152 mm) minimum diameter mixing blades.

Cleanup:

- **Use VM&P naphtha or mineral spirits** to thoroughly flush equipment. Leave solvent in the lines and equipment until next use. Do not leave product in the pump or hoses.

Precautions:

IMPORTANT: Repair leaks promptly to avoid adverse effects, including mold growth.

DO NOT:

- Apply on wet substrates
- Heat container
- Attempt to thin product
- Apply if rain, dew, fog, heavy moisture condensation, or freezing temperatures are in the 8-hour forecast

Physical Properties:

	Test Method	GAF Unisil HS Silicone Roof Coating (Approximate Values[4])
Solids by Weight	ASTM D1644	98%
Solids by Volume	ASTM D2697	97%
Tensile Strength	ASTM D2370	478 psi
Elongation	ASTM D2370	235%
Tear Strength	ASTM D624	28 lbf/in.
VOC	D3960	<100 g/L
Permeance	ASTM E96	8.7 perms

Product Details:

Packaging	5-gallon (18.9 liter) pail / 55-gallon (200 liter) drum
Colors	White, Light Gray, Dark Gray, Tan
Shelf Life	12 months from date of manufacture in unopened containers, if stored properly in a clean and well-ventilated area at 40°F – 90°F (5°C – 32°C). Storage outside temperature range will shorten shelf life. Keep containers covered when not in use. Do not allow coating to freeze.
Dry Time to Walk On (Approx.)	5 Hours at 70°F (21°C) 50% R.H
Application Temperature (Air)	40°F (5°C) and rising
Application Temperature (Surface)	40°F – 110°F (5°C – 43°C)
Thermal Emittance Initial	0.91 (White only)
Solar Reflectance Initial	0.84 (White only)
Solar Reflective Index (SRI) Initial	106 (White only)

[4] Values stated are approximate and subject to normal manufacturing variation. These values are not guaranteed and are provided solely as a guide.

For application questions contact GAF Technical Support at **1-800-766-3411**

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