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AQUAFIN

Technical Datasheet

RE-ROOF Silicone Coating

Single Component, High Solids, Silicone-based, Cool Roof Base Coat and Top Coat

CSI Div. 07 & 09
07 01 50 Maintenance of Membrane Roofing
07 01 50.61 Roof Re-Coating
07 14 16 Cold Fluid Applied Waterproofing
09 01 90 Maintenance of Painting and Coating

LEED Points
MR Credit 5.1, Regional Materials.....Up to 2 Points
IEQ Credit 4.2, Low-Emitting Materials Paints and Coatings...1 Point
Using this AQUAFIN product can help contribute to LEED certification of projects in the categories shown above.

Product Description:
RE-ROOF Silicone Coating is a single component, high solids, silicone-based, liquid-applied coating that functions as both a base coat and a top coat for Aquafin's RE-ROOF Silicone System. The RE-ROOF System is an eco-friendly, reliable solution for new roofs and cost-effective option for extending the life of existing roof systems.

Typical Applications:
- As the base coat for Aquafin's RE-ROOF Silicone System.
- As the top coat for Aquafin's RE-ROOF Silicone System.
- Apply RE-ROOF Silicone Coating over a wide variety of common roof surfaces that have been primed with the appropriate Aquafin primer.

Advantages:
- Quick & easy application
- Hydrophobic formula resists water
- Superior performance even in extreme temperatures
- Available in 3 popular colors; Light Gray, Tan and White

Priming and Surface Preparation:
- RE-ROOF Silicone Coating requires a primer for all applications. Select the appropriate primer(s) based on the type of substrate(s) and surface material(s) from the list below.
    - BUR: use RE-ROOF Primer WB
    - Concrete: use PRO-Tekt SP (Sealant Primer)
    - EPDM: use RE-ROOF EPDM Treatment
    - Galvanized Steel: use PRO-Tekt SP (Sealant Primer)
    - Masonry: use PRO-Tekt SP (Sealant Primer)
    - Modified Bitumen: use RE-ROOF Primer WB
    - Oil Contaminated Concrete: use VAPORTIGHT COAT®-SG2
    - Polyurethane: use RE-ROOF Primer PO
    - PVC: use RE-ROOF Primer PO
    - TPO: use RE-ROOF Primer PO
    - Wood (trim only): use PRO-Tekt SP (Sealant Primer)
- Refer to the corresponding primer Technical Data Sheet for surface preparation instructions and other important information.
- Ensure RE-ROOF Base Coat is applied to primed substrate within the required recoat times.
- Primed substrates must be dry, clean and free of dirt, dust, grease, oil, and other foreign substances that could interfere with adhesion.

Technical Properties:	
	RE-ROOF Silicone Coating
Durometer Hardness Shore A, ASTM D2240	45 - 55
Tear Strength, ASTM D624	45 pli
Tensile Strength, ASTM D2370	300 psi
Elongation, ASTM D412	250 ± 15%
Specific Gravity	1.32
Total Solids by Weight, ASTM D2697	94 ± 2%
Total Solids by Volume, ASTM D2697	94 ± 2%
Viscosity	10,000 - 15,000 cps
Permeability ASTM E965	7.9
Weathering QUV 5,000 Hours	No degredation
Reflectivity 3 years (White)	0.67
Emissivity 3 years (White)	0.90
SRI 3 years (White)	82
Colors:	Light Gray, Tan and White
VOC, ASTM D-2369-81	less than 0.42 lb/gal, less than 50 gm/liters
All data are averages of several tests under laboratory conditions. In practice climatic variations such as temperature, humidity, and porosity of substrate may affect these values.	

Adhesion Test:
To ensure a successful application, always perform several adhesion tests (ASTM D-903) with RE-ROOF Silicone Coating to ensure that the primer has successfully bonded to the roof substrate, and the primed roof substrate will accept RE-ROOF Silicone Coating. Do not proceed with the application of RE-ROOF Silicone Coating before adhesion testing.

Jobsite Preparation:
- Take all necessary precautions to ensure safety.
- Cover all intake vents near the work area.
- Minimize or exclude all personnel not directly involved with the application.
- Follow appropriate measures to prevent any sparks.
- Do not weld, smoke or allow any open flames during mixing, application or curing.

- Ensure that CO2 or other dry chemical fire extinguishers are within easy access.
- Only proceed with application when ambient temperature is minimum of 45°F (7.2°C) and falling, and more than 6°F (3°C) above dew point. Temperatures must be maintained within this range for at least 24 hours after the installation. Do NOT proceed with application when the temperatures drop below 45°F (7.2°C), if precipitation is expected, or if humidity is at or above 90%. Coating should not become wet within 8 hours after application. Special precautions are to be taken when ambient and/or substrate temperatures are approaching, at, or above 100°F (38°C) and it may be necessary to limit material application to evening hours.
- Hot surfaces should be cooled and shaded while cold surfaces should be heated and sheltered.

Mixing:

- Condition material to 60°F to 80°F (16°C to 27°C) prior to mixing and application.
- Use chemical resistant (Nitrile) gloves and goggles when mixing or applying RE-ROOF Silicone Coating.
- Open container and mix at slow speeds (not exceeding 500 rpm) for 1–2 minutes to evenly distribute pigments and other ingredients that may have settled, until a homogeneous mixture is achieved. Thoroughly scrape sides of pail as material is mixed. Boxing material is recommended to ensure color uniformity.
- Use caution not to whip air into the material as this may result in pinhole blisters and/or shortened pot life. Do not mix in an up and down motion.

Application:

Read all instructions thoroughly prior to installation.

- Flashing Treatment: Prior to the application of RE-ROOF Silicone Coating, treat edges, seams, joints, metal flashing, penetrations and transitions with RE-ROOF Silicone Flashing. Refer to the RE-ROOF Silicone Flashing Technical Data Sheet for surface preparation, mixing and application instructions, dry mil thickness requirements, approx. coverage, curing and recoat times. Allow to cure and pay close attention to recoat times.
- Primer: Apply the appropriate primer to the field areas in preparation for RE-ROOF Silicone Coating. Refer to the corresponding primer Technical Data Sheet for surface preparation, mixing and application instructions, approx. coverage, curing and recoat times. Overlap the flashing according to the primer instructions. Allow to cure and pay close attention to recoat times.
- First Base Coat: Apply the first coat of RE-ROOF Silicone Coating in a monolithic application using an airless sprayer, brush, or phenolic resin core roller. RE-ROOF Silicone Coating must be a uniformly thick, void-free, continuous membrane across the entire roof surface. Allow to cure and pay close attention to recoat times.
    - Smooth Surfaces: Apply at a rate of 123 ft²/gallon over smooth surfaces to achieve a minimum of 13 (± 1) mils WFT (wet film thickness).
    - Rough Surfaces: Apply at a rate of 100 ft²/gallon over rough surfaces to achieve a minimum of 16 (± 1) mils WFT (wet film thickness).

Notes: Do not apply RE-ROOF Silicone Coating at a rate of more than 1 gallon per 60 ft² (or more than 2 gallons per 120 ft²). Sagging and running is more likely to occur on sloped, slanted and vertical areas especially when the coating is applied to thick. Thicker coating applications also increase the chances of bubbles, blisters and/or pinholes. If necessary, apply RE-ROOF Silicone Coating in several thinner coats, allowing each coat to properly cure. Always verify that the proper WFT (wet film thickness) has been achieved by measuring each coat using a wet film gauge. As a minimum, it is recommended to check the mil thickness in every corner, plus the center areas of the roof. Large areas will require many check points. When applying multiple, thinner coats, verify that the total DFT (dry film thickness) meets the stated requirements. See coverage chart for minimum WFT (wet film thickness) mil guidelines and DFT (dry film thickness) mil requirements.

- Second Base Coat: Apply the second coat of RE-ROOF Silicone Coating in a monolithic application using an airless sprayer, brush, or phenolic resin core roller. RE-ROOF Silicone Coating must be a uniformly thick, void-free, continuous membrane across the entire roof surface. Allow to cure and pay close attention to recoat times.
    - Smooth Surfaces: Apply at a rate of 123 ft²/gallon over smooth surfaces to achieve a minimum of 13 (± 1) mils WFT (wet film thickness).
    - Rough Surfaces: Apply at a rate of 100 ft²/gallon over rough surfaces to achieve a minimum of 16 (± 1) mils WFT (wet film thickness).

Inspect the surface for damage prior to the application of the top coat. Any surface damage must be repaired with RE-ROOF Silicone Coating prior to the application of the top coat.

- First Top Coat: Apply the third coat of RE-ROOF Silicone Coating in a monolithic application at a rate of 123 ft²/gallon to achieve a minimum of 13 (± 1) mils WFT (wet film thickness). RE-ROOF Silicone Coating must be a uniformly thick, void-free, continuous membrane across the entire roof surface. Allow to cure and pay close attention to recoat times.
- Second Top Coat: Apply the fourth coat of RE-ROOF Silicone Coating in a monolithic application at a rate of 123 ft²/gallon to achieve a minimum of 13 (± 1) mils WFT (wet film thickness). RE-ROOF Silicone Coating must be a uniformly thick, void-free, continuous membrane across the entire roof surface. Allow to cure and pay close attention to recoat times.

Total System Thickness (field areas): 40 mils DFT

Notes: Total system thickness requirement excludes additional dry mils of primer coat(s), and flashing.

Curing:

- Curing time for RE-ROOF Silicone Coating is typically 8 hours at 75°F (24°C) and 50% relative humidity.

Notes: Mix RE-ROOF Silicone Coating with RE-ROOF Silicone Accelerator when faster curing times are desired. Refer to RE-ROOF Silicone Accelerator Technical Data Sheet for more information. When RE-ROOF Silicone Coating is mixed with RE-ROOF Silicone Accelerator, curing time is approx. 4 hours [based on 75°F (24°C) and 50% relative humidity].

- Apply next coat of RE-ROOF Silicone Coating within a maximum of 24 hours after the previous coat of RE-ROOF Silicone Coating. If more than 24 hours passes between coats, contact Aquafin Technical Department.

Note: When RE-ROOF Silicone Coating is mixed with RE-ROOF Silicone Accelerator, apply the next coat within a maximum of 12 hours. if more than 12 hours passes between coats, contact Aquafin Technical Department.

- Allow to cure for at least 48 hours [based on 75°F (24°C) and 50% relative humidity] before permitting light pedestrian traffic on the finished surface. Note: Surface is extremely slippery when wet. Use caution.

Limitations:

- Do not dilute under any circumstance.
- High temperatures and high humidity will accelerate the cure time. Low temperatures and low humidity will extend the cure time.

RE-ROOF Silicone Coating

Clean-up:
Clean tools and equipment with Naptha or similar product immediately after use. Cured material must be removed mechanically.

Packaging:
RE-ROOF Silicone Coating is packaged in a 5-gallon pail (18.9 liters).

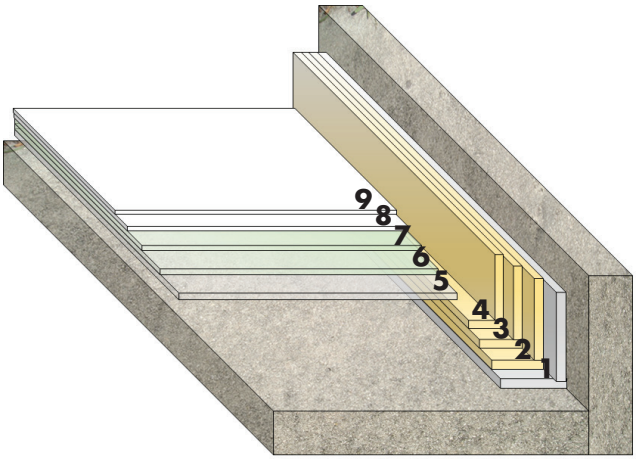
Shelf Life & Storage:
- 12 months in unopened, original packaging when stored at temperatures between 40°F and 90°F (4.4°C to 32°C).
- Keep containers closed, store in a dry, cool place away from heat, direct sun, sparks, open flame, and moisture.
- Protect material from freezing.

Note:
Proper application is the responsibility of the user. Field visits by AQUAFIN personnel are for the purpose of making technical recommendations and not for supervising or providing quality control on-site.

Safety:
Refer to SDS. For commercial use only. Ensure adequate ventilation in application area. Use Type C organic vapor cartridge respirators during spray application. Vapor inhalation problems are characterized by coughing, shortening of breath and tightness in the chest. Anyone exhibiting these types of symptoms should be immediately removed from the workplace and administered oxygen or fresh air. If the condition is prolonged or extreme, seek emergency medical assistance immediately. Avoid contact with skin and eyes. Wear fabric coveralls, neoprene gloves or other chemically resistant gloves and safety goggles during mixing and application. After contact with skin, wash with plenty of water. In case of eye contact, rinse immediately with plenty of water for 15 minutes and seek emergency medical assistance immediately. KEEP OUT OF REACH OF CHILDREN.

LIMITED WARRANTY: AQUAFIN, INC. warrants this product for a period of one year from the date of installation to be manufactured free of defects and to be consistent with its technical properties as stated in our current Technical Data Sheet. This product must be used as directed and within its stated shelf life. AQUAFIN INC. will replace or at our discretion refund the purchase price of any product, excluding cost of labor, which is proven to be defective. Our product recommendations are based on industry standards and testing procedures. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. We assume no warranties written, expressed or implied as to any specific methods of application or use of the product. AQUAFIN INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.
For Professional Use Only.

RE-ROOF Silicone System Layers:



RE-ROOF Silicone Coating - Coverage Rates				
WFT (wet film thickness) and DFT (dry film thickness) requirements are provided in mils				
	Minimum WFT (Wet Film Thickness)	Required DFT (Dry Film Thickness)	Coverage Rate Per Gallon	Coverage Rate Per Unit
1st Layer: Primer(s) for flashing area(s)	(see primer Technical Data Sheet)			
2nd Layer: 1st Coat Flashing: a RE-ROOF Silicone Flashing	18 mils	16 mils	88 ft²	311 ft² (3.5 gal unit)
3rd Layer : 2nd Coat Flashing: a RE-ROOF Silicone Flashing	18 mils	16 mils	88 ft²	311 ft² (3.5 gal unit)
4th Layer : 3rd Coat Flashing: a RE-ROOF Silicone Flashing	18 mils	16 mils	88 ft²	311 ft² (3.5 gal unit)
5th Layer: Primer for main field area	(see primer Technical Data Sheet)			
6th Layer: 1st Base Coat: RE-ROOF Silicone Coating	**13 mils (over smooth) 16 mils (over rough)**	**10 mils**	**123 ft² (over smooth) 100 ft² (over rough)**	**615 ft² (5 gal unit) 500 ft² (5 gal unit)**
7th Layer: 2nd Base Coat: RE-ROOF Silicone Coating	**13 mils (over smooth) 16 mils (over rough)**	**10 mils**	**123 ft² (over smooth) 100 ft² (over rough)**	**615 ft² (5 gal unit) 500 ft² (5 gal unit)**
8th Layer: 1st Top Coat: RE-ROOF Silicone Coating	**13 mils**	**10 mils**	**123 ft²**	**615 ft² (5 gal unit)**
9th Layer: 2nd Top Coat: RE-ROOF Silicone Coating	**13 mils**	**10 mils**	**123 ft²**	**615 ft² (5 gal unit)**
Actual coverage may vary due to texture, and absorption of substrate. Failure to achieve the required dry mil thickness will compromise the effectiveness of the product and void the warranty. It is the applicator's responsibility to verify that the required dry mil thickness has been attained.				

Check our website for the latest version of the Technical Datasheet. Only the current version is legally binding - and only for the intended market. In cases of uncertainty contact our technical department for further information before starting any applications.