



INSTALLATION GUIDELINES

KNIGHTSHIELD 5100 SILICONE ROOF COATINGS SPRAY GUIDE

This guide is the basic instructions for suggested spray application for KnightShield silicone coatings. In addition to the safety procedures identified in this document, all OSHA, EPA and any other local governing authorities should be consulted to ensure compliance with their requirements. Any personnel applying silicone coating should also familiarize themselves with all applicable Technical Product Data Sheets and Material Safety Data Sheets.

HEALTH & SAFETY

Some silicone coatings contain flammable solvents which could create finely atomized particles while spraying. All recommended safety procedures should be strictly followed. KnightShield silicone coatings are not designed for interior applications. Additional safety procedures will apply for application under these conditions.

PROTECTIVE EQUIPMENT

- Safety Glasses
- Nitrile Gloves
- Protective Suit
- Disposable Shoe Covers

During most outdoor spraying applications, chemical exposure levels will be below the OSHA permissible limits. Respiratory protection may not be required. Air monitoring should be conducted by a qualified person to identify any hazards. Should respiratory protection be required, use a NIOSH approved air-purifying or positive pressure supplied air respirator.

SPRAYING PRECAUTIONS

1. Keep all non-personnel away from spray areas.
2. Be certain not to spray over open energized electrical circuits.
3. Turn off all air intakes within 100' of spraying. During some conditions, a greater distance may be required. If air intakes cannot be shut off, charcoal filters may reduce or eliminate interior odors.
4. To eliminate overspray, shields or wind-screen(s) should be used.

STORAGE & HANDLING

1. Containers should be left unopened until ready for use.
2. Store material between 40°F and 90°F for optimum shelf life. Storage outside of those conditions for an extended period could affect the performance of the material.
3. Spraying in cold weather conditions, try to keep material heated to at least 65°F.
4. Store away from any sparks or open flames.

MECHANICAL MIXING

1. Separation can occur when silicone is stored for an extended period.
2. Thoroughly mix the coating with a mixing paddle for approximately 3 to 5 minutes until a uniform consistency is achieved.
3. To prevent static charge, ground container and equipment.
4. To prevent skinning of the coating in the container, place visqueen over the opening.

THINNING

Thinning of the coating is not recommended when applying during proper conditions and when using proper equipment.





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RECOMMENDED SPRAY EQUIPMENT

SPRAYER	HOSE	GUN	TIP SIZE
Graco Xtreme X70 (Air operated)	250'-350' 3/4" hose (high pressure, moisture resistant)	Graco XTR704	.029 to .050
Graco GH 933 (Gas powered)	250'-350' 3/4" hose (high pressure, moisture resistant)	Graco XTR704	.029 to .050

Graco X70



Graco GH 933



Colors	White, Gray, Black & Tan
Mixing	3 to 5 minutes to ensure even consistency
Airless Spray Rig	7000 PSI with an output minimum 3500 psi at the spray gun head
Tip Size	(.029 - .050) 50° Fan Tip
Spray Gun	5,000 PSI – Reverse Tip
Hose Type	250 ft – 350 ft 3/4 " ID; Moisture resistant hose and fittings
Transfer Pump	Minimum 3-gal/minute output
Rain Safe	45 min
Cure/Recoat Time	4 to 6 Hours
Storage	Seal immediately & store between 40° & 90° in dry place

Airless spray equipment can dramatically increase production when spraying silicone coatings. Be certain that the spray equipment is properly maintained and operated in accordance with the equipment manufacturer's instructions. W.R. Meadows assumes no responsibility for spray equipment.





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GENERAL EQUIPMENT RECOMMENDATIONS

- Adjust tip size depending upon conditions. Hose length, air temperature, material temperature, etc. can affect the spray pattern.
 - If the spray pattern is pulsating or shuttering, reduce the size of the tip orifice. This will decrease the material delivery volume and increase the pressure.
- To reduce applicator fatigue, install a wand extension at the gun with a 45° elbow at the tip.
- Be certain to never use hoses that were used previously to spray water-based products. Residual moisture in the hose will react with the silicone coating and cause the material to cure which will clog the hose or lock up your spray rig.

WEATHER CONDITIONS

Do not apply silicone coatings if any of the following climatic conditions exist:

- Rain, fog, dew, frost & windblown debris.
- Ambient temperature below 40°F
- Relative humidity above 90%
- Ambient temperature is within 5°F of dew point

To properly spray the silicone coating, ensure the material temperature is at least 65°F in the container during cold weather applications. The warmer the material, the lower the viscosity will be, which will be easier to spray.

SPRAY TECHNIQUE

While spraying, the tip should be 14" to 18" above the roof surface. While triggering the gun at the pass-lines, move at a rate to produce the desired coating thickness. Spray technique should include a half-lap technique where each spray pass is overlapped 50% for a uniform coverage ensuring no thin spots or "holidays / voids" are present. Constantly verify coating thickness during the application with a wet mil gauge.

CLEAN-UP

Clean tools and equipment with virgin mineral spirits. Depending on the hoses used, the silicone coating may be left in the hoses overnight. Ensuring there is no air in the line(s).

If the spray equipment is not going to be used for more than 24 hours, flush the coating out of the lines with virgin mineral spirits. Flush the hoses with 10 to 15 gallons of solvent during the initial flush and then complete a second flush with 10 to 15 gallons of clean solvent.



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