

### ROOFING TECHNICAL BULLETIN

Technical Service Department

Date: 17<sup>th</sup> November 2011

### Subject: Guide for Selecting Roof Coating Application Equipment

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#### General Tools & Equipment Needed:

Following is a list of power and/or hand tools and equipment that are typically needed to apply Abolin Co Elastomeric Reflective Coatings:

- Protective eyewear and gloves
- Ladders and safety equipment (warning flags/lines, tie-offs, etc.)
- Pressure washer & hoses
- Stiff bristle broom and scrub brush (wire brush for metal roofs)
- Ratchet or screw gun with sockets to remove and replace fasteners on metal roofs
- Airless sprayer – 2500 psi minimum, 4 liters per minute minimum material output recommended
- Hoses & spray tip kits for sprayer
- Open-end wrenches to tighten guns & hoses
- Thick-napped paint covers, roller frames, and handles
- Jiffy mixer or heavy duty drill and paddle to mix coatings prior to application
- Electrical extension cords
- Generator (optional)
- Clean rags
- Wet Mil Gauge

#### Spray Equipment Overview

Reflective elastomeric roof and wall coatings can be applied via roller, brush, or spray, the most cost efficient way (especially for large jobs) is the airless sprayer. Using this method, the coating is pumped from the container to a pump where it is pressurized to several thousand pounds per square inch (psi). The coating is then sprayed through a gun with a small orifice, or tip. The coating comes out of the tip at very high pressure and when it is exposed to the atmospheric pressure it disperses into discreet droplets.

Typically airless spray units are characterized by their spray rate, listed as gallons per minute (gpm), and their pressure. The number of spray guns that can be operated from the same unit are often listed also. Larger units will allow for longer hose runs. This can be helpful on large roof jobs where the coating and the airless spray unit can be kept on the ground and only the hose and gun are actually on the roof.

When deciding if an airless spray unit should be powered by either an electric motor or gasoline engine, consider the following: A gasoline airless sprayer is fully self-contained. In contrast, an electric motor, although less prone to the complexities associated with a gasoline engine, may require a very long extension cord. There is an appreciable electrical current drop when using a long extension cord and this can adversely affect the motor's efficiency.

If the airless spray unit has a filter, it should be removed. While the filter is needed for applying fine finishes and enamels, it merely increases the "back pressure" on the unit and lowers coating throughput.

There have been recent innovations in airless sprayers for home painting use, making them more affordable for the "do-it-yourself". However, these typically have low volume and pressure, making them inefficient for applying coatings.

### Spraying Elastomeric Acrylic Coatings

Using the airless spray method, pressurized acrylic coating comes out of the gun at atmospheric pressure. The pressure reduction then causes the coating to atomize into small discrete droplets. The main benefit of using this method is that any entrapped air is released.

For successful acrylic coating application, the equipment should have a delivery rate of 1.5 gpm, and the pressure should be at least 2,500 psi. A "Reverse-A-Clean" tip with a minimum tip size of 0.033 inches is recommended. However, the tip size can be increased to 0.045 inches for greater throughput. Note: Always size the tip to the pump output. The diameter of the hose leading from the pump to the spray gun can also affect the throughput of coating. Typically, a 3/8 inch diameter hose will be required for spraying acrylic coatings effectively but always check with the equipment manufacturer for their recommendation.

### Spray Equipment Recommendations

Graco, a leading airless spray equipment manufacturer, offers a number of units that have proven to be very reliable for the spray application of acrylic coatings. Below are a few recommendations:

For applying acrylic coatings, the HydraMax 350 is designed to supply coating at 4000 psi at a delivery rate of 3.5 gpm. The GMax 7900 is a smaller spray unit that supplies coating at 3300 psi at a rate of 2.1 gpm.

For an excellent “all around” unit that can be used for applying acrylic coatings, the GH733 is designed to supply coating at 3500 psi at a delivery rate of 3.0 gpm. This unit also allows you to run longer hose lengths, use larger tip sizes and multiple guns.

*\*special note: This Technical Bulletin is only a guide for “selecting” roof coatings spray equipment and not to be used as equipment instructions. When using one of the above mentioned manufacturers spray equipment, follow all of the manufacturers own instructions and safety precautions.*

### Roller

Use a quality ¾–1 1/4" nap roller cover. Completely saturate the roller and keep it loaded with the coating to build the required mils. Never dry roll. Cross roll, maintaining a wet edge, to achieve uniform thickness. Back roll in one direction for consistent appearance.

### Brush

Application by brush is recommended only for small inaccessible areas, e.g., on touch-ups. Use only a nylon brush.