WHITE-KNIGHT® PLUS

White-Knight Plus

Spray Application Guidelines

DESCRIPTION

This guide covers proper application tips when spraying a single component, moisture-cured polyurethane coating. Airless spray equipment is an effective method of application particularly on large areas and irregular or vertical surfaces. (Consult with equipment manufacturer for pump recommendations). Air-atomized application is not allowed because it will affect the application appearance of the coating.

Personnel using these products should familiarize themselves with procedures for personal safety, workplace precautions, and equipment operation. Refer to product data sheet, SDS, and application guides.

APPLICATION

Climatic Conditions

1. Rain, fog, dew, frost and relative humidity above 90% will adversely affect moisture-cured urethane coatings, impacting adhesion and physical properties of the coating. Do not apply if any of these conditions exist or will exist within twenty-four hours of application. The substrate must be dry at the time of application.
2. To properly apply the material, the material temperature must be 65°F (18°C) or greater and the outside ambient temperature cannot drop below 50°F (10°C).
3. At temperatures above 85°F (29.4°C), reduce the application rate on vertical or irregular surfaces to prevent sags or runs. Do not apply at temperatures above 95°F (35°C).

Mixing

1. Settling or separation may occur upon storage.
2. Mix material before using to assure uniform consistency. Use a Jiffy mixer for open head drums.
3. Ground container and equipment to prevent accumulation of static charge.

Spray Equipment

Airless spray equipment generates very high fluid pressure. Spray equipment must be properly maintained and operated. Any misuse of spray equipment or accessories (such as over-pressurizing, modified parts, or worn or damaged parts) can result in serious bodily injury, fire, explosion, or property damage. Read and follow the equipment manufacturer's instructions and recommendations.

1. Airless spray pump must have minimum 5,000 psi output pressure rating and adequate delivery volume to support the spray tip orifice gallons per minute rating. The Graco GH933 or an equivalent pump is recommended. High-pressure airless sprayers with a higher maximum pressure capability are required for the following conditions:
    - Using spray hose lengths greater than 200 feet
    - Applying in cold weather

Spray Pump Recommendations

1. Max GPM Rating – 2.5
2. Hose – 3/4" ID Hose first 100' (30.48 m) with swivel connections and 1/2" ID Hose for second 100' (30.48 m)
3. Pump pressure – 4,000 psi
4. High pressure fittings
5. Tip – .032 - .037 for a 8" pattern at 12" distance (20.32 cm pattern 30.48 cm distance)
6. Recommended 12" extension with swivel tip tip
7. Tip and pump sizes will change depending on temperature and pattern concerns.

Spraying Technique

1. Hold the spray gun perpendicular to the surface at a distance of 18 to 24 inches (46 to 62 cm) from the roof. While triggering the spray gun, move it at a rate to produce the desired coating wet mil thickness without thin spots or "holidays." Spray technique should include a "half lap" technique where each spray pass is overlapped 50% for uniform coverage. Check applied film thickness using a wet mil gauge.
2. Using the 4,000 psi fluid pressure will provide a uniform spray pattern without fingering.
3. Allow a minimum of 24 hours cure time between coats for cure and solvent evaporation. Spray across roof, back-roll as needed to ensure uniform coverage, then back spray across the same area to complete application.

Spraying Precautions

1. Rope off the area within 150 feet (46 m) of spray area.
2. Seal off ventilation intakes within the affected area.
3. Use windbreaks, where necessary, to confine spray mist and avoid damage to nearby surfaces due to overspray or drift.
4. Keep spectators and personnel away from spray area.

CLEAN UP

1. Clean airless spray equipment with Xylene. Circulate the appropriate solvent through pump supply, airless spray pump and spray hose to remove residual coating. Then flush with clean mineral spirits
2. Do not leave in airless spray system for more than one hour. Under certain conditions, it is possible for these coatings to jell or harden inside the equipment.
3. For long-term storage, a final flush with mineral spirits is recommended.
4. For further details, consult with technical support or sales representative.

Protection Equipment

1. Use supplied air-breathing apparatus with full-face mask or hood during any spray application unless monitoring demonstrates TDI exposure below OSHA permissible limits.
2. Fabric coveralls are recommended
3. Impervious gloves are recommended

COLD WEATHER RESTRICTIONS

Do not attempt application if ice, snow, moisture or dew is present. Restrict application when overnight temperature drops below 40 F (4.4 C). Ambient temperature must be 50°F (10°C) and rising through the day. Cooler temperatures will negatively impact the properties of the system. Contact your Garland Sales Representative for proper cold weather applications.

HOT WEATHER RESTRICTIONS

Do not attempt application if moisture or dew is present. Ambient temperature must be less than 95°F (35°C). Contact Garland Sales Representative for proper hot weather application.

STORAGE AND HANDLING

On the job site, store in a shaded ventilated area under a light-colored breathable reflective tarp. Do not store in direct sunlight. Storage temperature must range from 60-80°F (15°C to 26°C). Indoor ventilated storage is recommended when ambient temperature is below 60°F (15°C) or above 80°F (26°C).

Storage

1. Keep containers closed; store in a dry cool place away from heat, sparks, open flame and moisture.
2. Open containers should be blanketed with dry nitrogen before resealing.

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