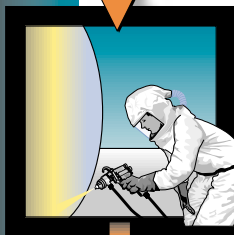


Epoxy Systems Spray Coating Operations Safe Handling Practices



SURFACE PREPARATION

It is important that the surface be prepared before the epoxy coating is applied. Abrasive blasting, detergents, and/or solvents may be used for cleaning. This may be followed by caustic or acid treatments to prepare the surface.

SAFETY AND HEALTH CONCERNS:

- ⚠ Exposure to airborne dusts, acid and alkaline mists, and/or solvents
- ⚠ Flammability of solvents

PROTECTIVE MEASURES:

- ⚠ Use adequate ventilation
- ⚠ Use respirators
- ⚠ Wear protective clothing, chemical-resistant gloves, and boots
- ⚠ Wear protective eyewear
- ⚠ Change PPE as needed



EQUIPMENT PREPARATION

Spray equipment for the application of the epoxy coatings must be prepared prior to use. Solvents may be used to purge lines and clean spray heads. The equipment must be assembled and tested.

SAFETY AND HEALTH CONCERNS:

- ⚠ Inhalation of solvents during equipment preparation
- ⚠ Skin contact with solvents and residual coating system
- ⚠ Injection of coating through the skin from high-pressure equipment
- ⚠ Flammability of solvents

PROTECTIVE MEASURES:

- ⚠ Use adequate ventilation
- ⚠ Use respirators
- ⚠ Wear disposable coveralls and chemical-resistant gloves
- ⚠ Wear protective eyewear
- ⚠ Follow safe work practice procedures and equipment manufacturers' instructions



BLENDING EPOXY COATINGS

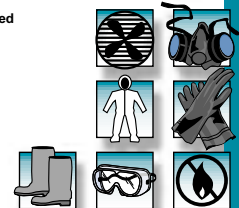
Coatings are generally supplied as two-component systems. In some systems, curing agents and epoxy resins are stored in separate holding tanks and combined later at the spray gun. Conventional spray equipment requires the resin and curing agents to be blended manually before the coating is applied. Solvents or reactive diluents may be added to thin the resin.

SAFETY AND HEALTH CONCERNS:

- ⚠ Skin and inhalation exposures when thinning epoxy resins with reactive diluents and solvents
- ⚠ Skin exposure by direct contact with coating system
- ⚠ Flammability of solvents

PROTECTIVE MEASURES:

- ⚠ Use adequate ventilation
- ⚠ Use respirators
- ⚠ Wear disposable coveralls, chemical-resistant gloves, and boots
- ⚠ Wear protective eyewear
- ⚠ Follow safe work practice procedures



SPRAY APPLICATION

Epoxy coatings may be applied with compressed air spray equipment, high-pressure airless, or air-assisted airless spray equipment. A ventilated paint booth can be used to control overspray while coating small objects. When objects are large or where coatings are sprayed outdoors, personal protective equipment is necessary to provide protection from overspray.

SAFETY AND HEALTH CONCERNS:

- ⚠ Fire hazard from improperly grounded equipment
- ⚠ Injection of coating through the skin from high-pressure equipment
- ⚠ Skin exposure by direct contact with coating system
- ⚠ Skin and inhalation exposure to overspray mists

PROTECTIVE MEASURES:

- ⚠ Spray equipment and target object must be properly grounded
- ⚠ Wear disposable coveralls, chemical-resistant gloves, and boots
- ⚠ Wear protective eyewear
- ⚠ Use adequate ventilation
- ⚠ Use respirators
- ⚠ Replace contaminated clothing at breaks
- ⚠ Remove personal protective equipment outside of work area and avoid skin contact with coating



CURING

Once the epoxy coating has been applied, the system must cure. Depending on the formulation, ventilated curing ovens may be used or the coating will dry at room temperature with natural ventilation. The coating may require several minutes to several hours to dry to the touch.

SAFETY AND HEALTH CONCERNS:

- ⚠ Inhalation of coating system vapors
- ⚠ Flammability of solvent vapors from uncured coating systems
- ⚠ Skin contact with uncured coatings

PROTECTIVE MEASURES:

- ⚠ Use adequate ventilation
- ⚠ Use respirators
- ⚠ Wear disposable coveralls and chemical-resistant gloves if contact is possible



CLEANUP

When the job is complete, tools and equipment must be cleaned. This includes purging feed lines with solvent and partially disassembling spray equipment.

SAFETY AND HEALTH CONCERNS:

- ⚠ Grounding of equipment and flammability of solvents
- ⚠ Inhalation of solvents during equipment cleaning
- ⚠ Skin contact with solvents and residual epoxy coating
- ⚠ Injection of solvent and coating into the skin from high-pressure spray equipment
- ⚠ Eating, drinking, or smoking before cleaning exposed skin

PROTECTIVE MEASURES:

- ⚠ Ground all equipment while cleaning with solvents
- ⚠ Use adequate ventilation when cleaning equipment
- ⚠ Use respirators while cleaning equipment
- ⚠ Wear chemical-resistant gloves and protective eyewear
- ⚠ Remove protective equipment before entering lunch or
- ⚠ Avoid skin contact when removing personal protective equipment
- ⚠ Clean or dispose of contaminated clothing
- ⚠ Use industrial skin cleaners to remove any coating system on skin
- ⚠ Shower at the end of the shift



Remember: Always read the MSDS before using a chemical



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