Topic 355: Safe Use of Airless Sprayers

Introduction: Airless sprayers are a great way to paint, seal, or spray any liquid where fast coverage is desired. A high volume can be applied in seconds to a surface which would take much more time to cover using either brushes or rollers. The high volume output of an airless sprayer is possible because of the high pressure delivered from the pump. This high pressure output presents hazards to the user of an airless sprayer which can be avoided by following these guidelines:

- Employers must ensure that personnel who use airless sprayers are trained to safely operate the equipment.
- Review MSDS for all materials to be used in the airless sprayer.
- Proper personal protective equipment (PPE) must be worn at all times when operating an airless sprayer. This PPE should include:
  - Eye/face protection
  - Respiratory protection (Check MSDS of material being applied for proper respiratory protection).
  - Non-slip footwear
  - Gloves (chemical resistant if hazardous material is used in the sprayer).
- Read and understand the operator’s manual for the equipment you are using.
- Keep fingers, hands, and all body parts away from the spray nozzle. Do not point the spray nozzle toward yourself or any personnel. The high operating pressure of an airless sprayer could force the sprayed material under your skin, causing severe injury.
- Before changing or cleaning the nozzle tip, shut off the sprayer pump and disconnect the power source. bleed any residual pressure from the sprayer line, and lock the spray gun trigger in the open (spray) position.
- Inspect the machine before use for missing or loose machine guards, loose or missing bolts or nuts, and any damaged parts. Repair or replace missing or damaged parts or machine guards before operating the sprayer.
- Before operating the sprayer, check the hose for any leaks, loose connections, kinks, or wear. Periodically check the hose for signs of damage or evidence of rupturing.
- Ensure that the tip guard is present and secure before operating. Do not operate an airless sprayer without the tip guard.
- Use manufacturer approved parts when making any repairs or replacements on the sprayer.
- If using flammable solvent to clean the sprayer, run the pump at minimum pressure with the tip removed to prevent the solvent from misting or atomizing. Vapor and fine mist from flammable solvents are more prone to ignite from static electricity or ignition source.
- Do not spray material without proper ventilation and respiratory protection. Check MSDS for respiratory protection requirements.
- Do not smoke or allow open flame or any ignition source within 50 feet when using flammable material in the sprayer.
- Keep a properly rated and charged fire extinguisher available at all times when spraying flammable material.
- Do not check for hose or pump leaks with your hand when the sprayer is running. Use a piece of wood or cardboard to prevent fluid pressure from being forced under your skin.
- Use the lowest pressure setting possible to reduce overspray which creates respiratory hazards and possibly flammable vapors. Reducing overspray also results in a more professional job.
- Do not leave the airless sprayer unattended while it is running, or while there is still pressure in the hose.

Conclusion: Airless spraying is a convenient method to cover large areas or surfaces with complex angles or curves. Always follow the manufacturer’s recommendations for use of an airless sprayer, and follow the guidelines above for safety.

Work Site Review

Work-Site Hazards and Safety Suggestions:

Personnel Safety Violations:

Material Safety Data Sheets Reviewed: ____________________________ (Name of Chemical)

Employee Signatures: (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

Foreman/Supervisor’s Signature:

These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.