

Small Business Environmental Assistance Program

NYS Pollution Prevention Institute

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NYCRR Subpart 228-1 Surface Coating Processes - Spray Gun Cleaning (September 2022)

Spray Gun Cleaning at Automotive Refinishing Facilities and Other Surface Coating Operations

Part 228-1 requires spray guns that are used to apply automotive repair and refinishing coatings and other surface coating operations to be cleaned by one of the following methods:

1. **An enclosed spray gun cleaning system.** The spray gun is partially disassembled and placed in an automated gun washer. The lid on the gun washer must be closed to minimize solvent emissions and worker exposure. The washer cleans the spray gun by flushing liquid solvent through the spray gun components with the solvent draining back into a reservoir to be reused.
2. **Non-atomized solvent cleaning.** The spray gun is cleaned by running solvent through the gun using no pressure (gravity fed) or very low pressure (not enough to atomize the solvent). The dirty solvent is collected in a waste solvent container.
3. **Disassembling and cleaning of the spray gun in a container.** This traditional method of gun cleaning is labor intensive and time consuming; whereby the gun cleaning must take place in a vat, this poses a risk for worker exposure to solvent vapors. This method is allowed in Part 228 and on occasion, it may be necessary to perform a thorough gun cleaning.

NOTE: With any of the above methods, the gun cleaning equipment and/or containers involved in the cleaning process must always be kept closed when not in use.

NEVER clean a gun by intentionally spraying solvent into a spray booth. This is **NOT** allowed.

Spray Gun Cleaning – Choosing Solvents

No matter which method is used to clean your spray guns, carefully select and review specifics of the solvent that you wish to use. Standard lacquer thinner may be cheap (relatively speaking) and perform well cleaning your spray gun, but most lacquer thinners will become an F-Listed hazardous waste. To further complicate things, anything that comes in contact with an F-Listed hazardous waste will also become an F-listed hazardous waste. For example, you clean your spray gun with a lacquer thinner that contains 15% toluene; afterwards, you wipe the gun with a rag to remove the last bit of thinner. The rag is going to be a hazardous waste, even if it is bone dry at the time of disposal. Call the SBEAP if you need help determining if your gun cleaner is an F-Listed hazardous waste, and refer to our “Pollution Prevention Tips” on the next page for alternative options.

Pollution Prevention Tips

Solvent

1. Extend the use of your solvent: by using dirty solvent to perform the initial cleaning and then switching to clean solvent to perform the final rinse, you will increase the longevity of the solvent.

2. Your solvent should do a good job cleaning your spray guns, however, *please consider the following procedures, listed in order from Most Green to Least Green:*

Choose a solvent that does not contain solvents or chemicals that would make it a hazardous waste. But be careful, if you don't know what determines a hazardous waste, contact the SBEAP (Contact information found below.) Phrases such as "biodegradable" or "water-based" may give the impression of being environmentally friendly, but they still could contain chemicals or solvents that could become a hazardous waste.

- *Choose a solvent that evaporates slowly.* A solvent with a low vapor pressure reduces exposure to vapors and minimizes solvent loss. But be careful, excessive residue on the spray gun may require the need to wipe the spray gun with a rag which may generate another waste stream.
- *If you must use a solvent that will become a hazardous waste, choose a solvent that is an ignitable hazardous waste (Flash Point less than 140°F, waste code D001).* Substitute this in, rather than an F-Listed hazardous waste; D001 hazardous wastes are generally less toxic than F-Listed hazardous wastes. Also a small amount of D001 hazardous waste on a rag, such as from wiping solvent residue off of a spray gun should not make the rag a hazardous waste. (For more information on rags, get a copy of the *Shop Towels, Industrial Rags, and Soiled Clothing* fact sheet.)

In addition to the solvent chemistry, the paint residue alone can make your solvent a hazardous waste!

Equipment

1. *Consider purchasing a gun washer:* These enclosed units can reduce the exposure to solvents and amount of labor required to clean spray guns.
2. *Use disposable liners or cups:* They can significantly reduce overall clean-up solvent usage since the cup contains the majority of paint residue. Without the need to clean the cup, only a small amount of solvent is needed to clean the internal gun components.
3. *Consider purchasing a distillation unit, or "still" (reclamation unit, recycler, etc.):* These units can pay for themselves in a year by reducing the amount of solvent purchased and reducing the amount of hazardous wastes disposed. The still bottoms or puck will still be a hazardous waste if you are using a solvent that is an F-listed hazardous waste.
4. *Use filters:* They can extend the life of your cleaning solvents. If your unit lacks adequate filtration to remove solids, consider either investing in a new one or improving upon your current filter.