MANAGING PAINT BOOTH FILTERS

SOLID WASTE SECTION

HEALTH AND ENVIRONMENTAL CONCERNS

Spray booths with exhaust filters collect paint particles thus preventing them from polluting the air and protecting employee's respiratory passages. Often the paints that collect on the filters are hazardous, potentially making the filters hazardous.

WHAT COULD MAKE PAINT FILTERS HAZARDOUS?

EVALUATING THE WASTE.

No matter what type of filter is used, the waste generator is responsible for evaluating the filters to determine whether or not they are hazardous. A waste can be evaluated by…

1. Using "processor knowledge" of the waste to show your waste is non-hazardous as long as you provide documentation to back up your evaluation. A written statement or certification from the manufacturer stating that any metals in the paint you use are below regulatory limits.
2. By having the waste evaluated by a laboratory using the Toxicity Characteristic Leaching Procedure (TCLP), (See table 1 for EPA limits.)
3. Ignitability - Paint waste and filters are hazardous waste if they exhibit the characteristic of "ignitability". To be hazardous for the characteristic of ignitability, filters would: be capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burn so vigorously and persistently that it creates a hazard, or if a liquid, have a flashpoint less than 60 C (140F). Laboratory testing is the only way to show that waste filters definitively do not exhibit these characteristics.

IF USING THIS METHOD:

- Spraying a listed hazardous solvent into the filters when cleaning spray guns…

The paint filters are considered hazardous waste, even if it passes the TCLP testing, and must be managed as hazardous waste. Many solvents used in paint-line and gun-cleaning processes contain F-listed solvents. Materials contaminated with F-listed solvents remain hazardous even after the solvent has evaporated from the material, and the leftover sludge also remains hazardous. When evaluating paint filters to determine whether they are hazardous, you do not need to consider any F-listed solvent ingredients in a paint, as they are part of the paint formulation. But, the TCLP concentration of D-listed solvents must be considered when making a hazardous waste determination.

TABLE 1: EPA TCLP REGULATORY LEVELS

Metal	Regulatory Level Mg/L	EPA HW#
Arsenic	5.0	D004
Barium	100.0	D005
Cadmium	1.0	D006
Chromium	5.0	D007
Lead	5.0	D008
Mercury	0.2	D009
Selenium	1.0	D010
Silver	5.0	D011
MEK (Methyl Ethyl Ketone)	200.00	D035
Tetrachloroethylene	0.7	D039
Trichloroethylene	0.5	D040
Flashpoint	>140F	D001

Paint waste (including filters) would only be "listed" hazardous waste if you put additional listed solvent into the paint or into the filter. Remember that a non-hazardous product may become a hazardous waste because of the process it goes through or the contaminants it picks up. Also, if the solvents are recycled in a solvent still, the leftover sludge or "puck" is also hazardous.

Be sure you have data to support your determination and keep a record of it.

See some examples of listed solvents in table 2.

Iowa Department of Natural Resources | 502 E. 9th St. Des Moines, IA 50319 | (515) 725-8200

MANAGING PAINT BOOTH FILTERS

SOLID WASTE SECTION

Table 2: EPA listed Solvents

All spent solvent mixture/blends containing, before use, a total of ten percent or more by volume of any of the F001-F005 solvents and the still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F001 the following solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1 – trichloroethane, carbon tetrachloride and chlorinated fluorocarbons.

F002 tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1- trichloroethand, chlorobenzene, 1,1,2-trifluoroethand, orthodichlorobenzene, trichlorofluoromethan and 1,1,2-trichloroethand

F003 xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, *n*-butyl alcohol, cyclohexanone and methanol.

F004 cresols and cresylic acid, and nitrobenzene

F005 toluene, methyl ethyl ketone (MEK), carbon disulfide, isobutanol, pyridine, benzene, 2-ethosyethanol and 2-nitropropane.

EPA information on hazardous waste including a complete list of listed wastes can be found at http://www.epa.gov/epaoswer/osw/hazwaste.htm

The waste generator must evaluate the waste to determine if it is hazardous so proper disposal can be implemented. The landfill may impose restrictions or additional testing prior to landfilling.

If filters are non-hazardous, they can be managed as an industrial solid waste and can be placed in the landfill. Some landfills may require a Special Waste Authorization for disposal. Check with your local solid waste landfill for disposal procedures.

Make sure the filters are completely dry prior to disposal to minimize the chance of fire. Some dried coatings may give off vapors that can ignite other combustible materials. Use best management practices (BMP's) to minimize the contact between filters and combustible materials such as paper. Take precautions during hot weather as a covered load of dried filters mixed with combustible material could potentially cause problem.

The landfill has the authority to require additional testing on the waste material prior to delivery at the landfill and may also pose safety precaution measures.

Generators may contact the EPA for issues related to the Resource Conservation and Recovery Act (RCRA) at 913-551-7958. Check out EPA's fact sheet on "What makes a waste hazardous" at *www.epa.gov/wastes/wycd/manag-hw/e00-001e.pdf*

Disclaimer: this fact sheet is not intended as a substitute for the regulations and statues that apply. Rather, it is a helpful guideline on the topic.

Iowa Department of Natural Resources | 502 E. 9th St. Des Moines, IA 50319 | (515) 725-8200