Autobody Paint Booth Filters: Are They Hazardous?

A recent study of paint booth arrestor filters from autobody shops in King and Kitsap counties found halogenated organic compounds (HOCs) at regulated levels, but with fewer heavy metals. What does this mean for local shops? Using primers and paints without regulated metals minimizes costs for hazardous waste disposal, but shops will need to test filters for HOCs. The sampled body shops used so many different products that the sources of HOCs could not be statistically identified.

The Local Hazardous Waste Management Program in King County and Kitsap County Health District conducted the study to learn more about halogenated organic compounds and toxic heavy metals in filters and to provide guidelines for autobody shops trying to reduce hazardous waste costs. HOCs (chemicals with a carbon atom bonded to chlorine, bromine, fluorine or iodine) are found in many filter elements such as binders, adhesives or flame retardants. Such chemicals may also be present in the pigments of automotive paints. Persistent HOCs do not disintegrate when released and accumulate as pollutants that may affect human health. In the past, regulated metals like chromium, barium, cadmium, and lead were commonly used in paint pigments. With newer paint formulations, only one sample contained metals above the regulated concentration. The shop had used a zinc chromate primer, not typical of most autobody shops.

Paint booth arrestor filters protect workers and the environment by collecting hazardous paint overspray. Because these filters may contain hazardsous chemicals, state regulations require that shops determine whether filters are hazardous waste. Filters cannot be thrown into the garbage without a waste clearance issued by Public Health – Seattle & King County. Requesting a clearance is free, and it's the best way to determine if the filters are garbage or hazardous waste.

Recommendations

1. Avoid generating dangerous waste by choosing filters that are free of halogenated organic compounds. Questions to ask vendors:
   - Do the binders, adhesives or flame retardants in the filter contain HOCs?
   - Do filters contain other sources of HOCs?
   - Review paint filter material safety data sheets (MSDSs) for ingredients with halogens: chlorine, bromine, fluorine or iodine.

Produced by

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AutobodyPaintFilter.eps

2. Before throwing away paint filters, contact the **Waste Characterization Program at 206-296-4633, or wc@metrokc.gov** for testing guidance, a Waste Characterization Form, and waste clearance and disposal instructions.
   - Health Departments will ask for a TCLP metal test only if zinc chromate primers or other paints with heavy metals are used.
   - All filters will need to be tested for HOCs.
3. How to sample paint filters:
   - When filters need to be changed, cut a one foot square piece from the dirtiest part of the filter or bank of filters and seal it in a resealable plastic bag. Protect yourself from hazardous dusts during this process.
   - Send the filter sample to a state certified lab (list attached).
   - Request SW-846 Method 9023.
   - Check the Material Safety Data Sheets (MSDS) or ask the paint manufacturer to see if the primer contains lead, chrome or cadmium. If so, request SW -846 Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) for Metals.

Send or fax a copy of the lab results and a completed Waste Characterization Form to:

Public Health – Seattle & King County
Waste Characterization Program
Wells Fargo Center
999 3rd Ave, Suite 700
Seattle, WA 98104-4039
Phone: 206-296-4633
Fax: 206-296-3997
E-mail: wc@metrokc.gov

Based on the laboratory results, the Waste Characterization Program staff will authorize the filters for solid waste disposal or recommend disposal options as hazardous waste. If your filters are hazardous waste, technical assistance is available to help identify the source of the hazardous chemicals. If these sources can be identified and eliminated, waste filters generated in the future may be authorized for disposal as regular garbage.

For a copy of the study visit *http://apps01.metrokc.gov/govlink/hazwaste/publications/index.cfm*.