

# Fact Sheet: Autobody Shops

Office of Waste Reduction

Fact Sheet

November 1988

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## **Autobody Shops are Prime Candidates for Waste Reduction.**

Typical wastes generated by autobody shops include waste paint thinner, cleaning solvents, and paint wastes. In order to run your shop as economically and efficiently as possible you should reduce all types of wastes including dangerous wastes, solid wastes, and air and water emissions.

There are a variety of ways that you can reduce the amount of waste that you generate and in turn reduce your operating costs. Potential dangerous waste reduction techniques for autobody shops include:

### **"Good Housekeeping"**

Good housekeeping measures can greatly decrease the amount of wastes that are generated. To reduce excess waste production:

- Keep tight fitting lids and bungs on containers to prevent loss of chemicals through evaporation or spillage. Keeping lids on containers also prevents contamination with water, dirt or other materials.
- Use spigots and pumps when dispensing new materials and funnels when transferring wastes to storage containers to reduce the possibility of spills.
- Make sure that personnel are well trained. This will reduce the potential for off-spec paints being mixed. Also, well trained personnel can usually use less solvent for clean-up purposes.
- Store products in locations that will preserve their shelf life. For example, store paint products in locations protected from temperature extremes.
- Accumulate wastes indoors or in a covered area to prevent moisture from seeping in.
- Never mix different types of waste together. Mixing wastes may make recycling impossible, or make waste disposal much more expensive.
- Inspect all damaged vehicles for leaks before they are brought into your shop. If leaks are detected, drip pans should be used to catch the leaking materials to prevent them from getting on to floors and into drains.

### **Keep Waste Streams Segregated**

Waste stream segregation is one of the simplest techniques you can use to reduce your wastes. By keeping your waste paint separate from your waste thinner you reduce contamination of the waste thinner. This is especially important if you are going to reuse the used thinner as wash thinner.

### **Raw Material Substitution**

Consider replacing your current raw materials with raw materials that reduce the amount or toxicity of the waste that you generate. Although the substitution of water-based paints for solvent-based paints is increasing in many paint-associated industries, few water-based paints provide viable alternatives in the auto painting industry. A practical sealing method needs to be developed before the substitution can take place on a large scale. However, as in most cases where there is a demand a method will usually be developed.

## **Modify Your Process**

- Mix your own paint-this allows you to mix only the amount of paint needed for a particular job and therefore reduce the amount of waste paint generated.
- Use more efficient spray equipment-paint overspray creates waste and causes economic losses. The chart below illustrates the efficiency rates of various types of paint spraying equipment.

## **Equipment: Transfer Efficiency**

1. air-atomized: 30-60%
2. electrostatic: 65-80%
3. powder coating: 90-99%

Decreasing the size of spray gun paint cups can reduce waste generation by limiting the amount of leftover paint and decreasing the amount of solvent needed for equipment cleaning.

## **Solvent Reuse or Replacement**

Solvents can be reused prior to recycling in a variety of ways. For example:

- Used solvent can be used to rinse out spray equipment initially and then a small amount of fresh solvent can be used to clean out any residue.
- In cases where high purity solvents are required for cleaning certain parts, clean these parts with fresh solvent and then use the used solvent to clean other dirtier parts.
- Recycled paint thinner, although not always suitable for use as a paint thinner again, can be used as "wash thinner." Another method you can use to obtain "wash thinner" is to simply allow the waste thinner to separate out into thinner and sludge. Then siphon the thinner off and use it as "wash thinner."

## **Solvent Recycling**

Solvent recycling can be done off-site or on-site.

- You can contract with a solvent tank maintenance service. They will come to your business on a regular basis, remove the solvent and sludge from your tank and replace it with clean solvent.
- Spent solvents can be sent off-site to a commercial recycler where generally 70-80% of the solvent can be reprocessed and sold back to the generator at a reduced cost.
- Solvent recovery can also take place on-site. Commercial solvent recovery units are available in various sizes; the smallest units can handle 5 gallons of waste solvent per batch. Most recovery systems pay for themselves in less that two years by reducing the quantity of raw material needed to be purchased and the amount of waste which has to be managed.

However, there are many factors you should consider before making the decision to install a solvent distillation unit. Contact Pinellas County's Pollution Prevention and Resource Recovery Program at 464-4761 for information on selecting a still for on-site recycling.

A study done in California determined that as little as 0.3 gallons of paint thinner can be used per car. Determine how much thinner you use per car, then try some of these techniques to see if you can reduce the amount you use.

## **Non-Hazardous Waste Reduction Methods**

Non-hazardous waste reduction methods used successfully by Washington businesses include:

- **Reusing and/or recycling paper**-- A simple strategy employed to reduce the use of paper is to use both sides of the sheet, either by making two-sided copies or by using the backside of paper as scratch paper. Newspapers are often donated to charities by businesses. Other types of paper are sold for recycling.
- **Recycling cardboard**-- Some businesses that generate large amounts of cardboard have found it economically feasible to bale and sell their cardboard. Businesses with small amounts of cardboard usually give it away to a business or charity willing to pick it up.
- **Reusing and/or recycling 55 gallon drums**-- Businesses either return empty drums to the chemical supplier or give them to a cooperage company who reconditions and sells them. (Keep in mind that these drums must meet the definition of "empty" as defined in section 160 of the Dangerous Waste Regulations.)

## **Energy and Materials Conservation Program**

- **Try to use the latest technology.** New equipment may require less energy to operate.
- **Identify all materials that you use in your facility.** Evaluate how much is going into products and how much is disposed.  
**Monitor your water and electric meters routinely for a period of time.** Identify peaks and valleys for usage during the day and week. Determine if there are activities that consume water and electricity that could be curtailed during non-production hours.

Information for this Fact Sheet was obtained in part from the Alaska Health Project.

Fact Sheet produced in its original form by:  
Washington State Department of Ecology  
Office of Waste Reduction and Recycling  
Mail Stop PV-1 1  
Olympia, WA 98504-8711  
(206) 438-7541

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*Last Updated: November 16, 1995*

***Contact Pinellas County's Pollution Prevention and Resource Recovery (P2R2) Program at 464-4761 for Waste Reduction Assistance***