



Pollution Prevention Fact Sheet

Managing Drums and Other Empty Containers

Utah Department of Environmental Quality

Promoting a Healthy Environment

What should companies and others do with empty drums and other containers? Any company that buys, supplies or acquires these containers must decide how to "get rid" of the drums and containers in which the materials are packaged or delivered. Public services such as used oil collection centers are also confronted with the management of empty drums and plastic containers in which used oil is delivered to the center. Regardless of the type of drum or container, the choice can impact operating costs and available storage space. Fortunately, there are low cost ways to reuse, recycle and dispose of used drums and containers. Depending on their physical condition, including degree of cleanliness, used drums and containers have commercial value. In fact, used drums and containers should be thought of, and handled as, production by-products. The establishment of a well-thought-out, in-house system for collecting, cleaning, storing, marketing and recycling of used drums and containers can lead to significant operating cost reductions and storage problems.

Points to Keep in Mind

Consider drums and other containers as a valuable resource rather than a disposal problem.

1. Always Empty Used Drums and Containers Thoroughly

Residual material shouldn't become waste. Leaving material in containers is a waste of resources. It pays to show employees how to empty containers thoroughly and to stress the need for productive use of all of the materials within each drum or container.

For some materials, it may be necessary to install draining stands to achieve full removal. In some cases it may be necessary to mechanically lift and tilt large containers to thoroughly empty them into larger collection containers or storage tanks. Dirty containers cost money. Both the reuse and recycling potentials of used containers virtually disappear if contamination is present. Market values of used containers decrease if visible product remains in them.

Avoid long-term liability. It is especially important to remove all hazardous materials from drums and containers. Users of drums and containers that have held hazardous substances should implement standard emptying and cleaning procedures to assure that hazardous residues are not present in discarded drums and containers.

There are some precautions and rules that pertain to the safe handling of drums and containers that have contained hazardous waste. These requirements are specifically outlined in "Residues of Hazardous Waste in Empty Containers", R315-2-7, Utah Administrative Code. The Hazardous Waste Management Rules may be viewed at the following web site: www.hazardouswaste.utah.gov/hwrules.htm.

2. Avoid Container Damage

The value of used drums and containers is highest if there are no structural defects. Drum and barrel reconditioners will accept badly damaged containers; however, where applicable, deposits on containers may be forfeited when damage is severe. Companies can realize cost savings as they minimize damage to containers by using good material handling techniques, such as:

- Don't stack drums and containers too high; avoid putting higher loads on containers than they are designed to withstand as well as preventing the stack from tipping over.
- Use pallets and skids under large drums and containers to enable lifting and moving without stressing them.
- Avoid pushing drums and containers around with the arms of a forklift unless they are designed for it.
- Train employees to keep all bungs, rings and lids with containers, preferably mechanically attached, so that they are not lost. Missing accessories lowers reuse and recycle value. In some cases where drums still contain material such as used oil, the attached lid and bungs prevent water entering the drum or container.
- Store drums and containers in a dry location. Provide covering for drums and containers that must be stored outside.
- When shipping drums, place a sheet of one-inch foam on the pallet. Wiggle and press the drum downward and strap securely. The foam helps secure the drum in place and reduces the flexing of the bottom panel, decreasing the potential damage to the bottom of the drum while being shipped.

3. Making Used Container Choices

Ways to "get rid" of used drums and containers are listed below in order of their preference with respect to lowest costs and lowest adverse environmental effects:

- a. Avoid disposable containers.** Minimize the costs of used drums and containers by using ones that are returnable or can be reused. In the case of some businesses, not only do returnable containers virtually eliminate disposal costs, they sometimes provide justification for investment in more efficient container design. For example, special handles may be incorporated for easier handling. The use of collapsible, rectangular-shaped containers minimizes space requirements for storage after emptying.
- b. Reuse containers whenever possible.** If uncontaminated and undamaged, virtually all containers can be reused. Many used drums and containers can be sold to reconditioners who clean and repair them as necessary and then sell them to material suppliers. Barrels and drums must be sturdily built for reconditioning to be an option. For example, a 55-gallon steel drum must have 20 gauge side walls and 18 gauge ends as a minimum to be suitable for reconditioning. Arrangements may be made to sell or give used containers to other businesses or non-profit organizations. The services of "Material Exchange" programs are available to help locate businesses that need used containers. The receiver of the drums and containers usually arranges for shipment and, depending upon the quality of the drums and containers may pay an agreed-upon price per container. Many non-profit organizations and citizen groups need used drums and containers for a variety of projects. For example, clean plastic drums are in demand by gardening clubs for backyard composting projects.

- c. **Recycle damaged or unusable containers.** Steel, aluminum, corrugated cardboard, paper and many grades of plastic have recycling value. Damaged drums and containers can often be recycled, provided they are free of contamination. Washing and rinsing may be necessary. Try to find a scrap dealer that is nearby so that the drums and containers need not be transported long distances. Provide a convenient pick-up space and location. Often the scrap dealer will want the ends of drums and cans removed and bodies flattened to concentrate the scrap.
- d. **Plastic drums, barrels, and buckets pose special problems.** The thick walls of such containers yield large quantities of plastic for which there is a strong marketing demand. But special equipment is required to saw, shred and grind the containers into usable form. Not all processors have such equipment and the search for a capable processor of plastic material may be more extensive than for other materials. Scrap dealers may not always pay for used drums and containers. But, using their services saves landfill space and may save you money over disposal costs.
- e. **The disposal of pressurized containers poses a high risk of injury or death.** High pressure containers such as acetylene and other industrial gases pose a danger of self ignition and possible exposure to poisonous gases if not handled properly. No attempt should be made to empty them by venting or flaming of the contents. When no longer useable, they should be transported, as is, to an industrial gas supplier for reuse or disposal. To prevent accidents most suppliers will accept the containers without charge. The handling of propane tanks should be handled in a similar manner and returned to commercial propane dealers for refilling, recycling or disposal. Landfills and household hazardous waste facilities will not accept any form of pressurized containers.
- f. **Landfills for drum and container disposal.** This method of disposal is the least desirable, primarily due to the limited space in landfills. However, some landfills, usually in rural areas will take drums and containers under certain conditions and there may be a charge for disposal.

Warning: *Under the federal Superfund Amendments of 1986, hazardous residues left in empty drums and containers may subject the owner to liability for the cleanup of the drums and containers as well as the property where the drums and containers were stored. Therefore, while a drum may be empty under hazardous waste rules, caution should be used in the handling of empty drums and containers containing residues of hazardous substances.*

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For More Information, Contact:

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