

Aerosol Cans: Guide to Handling and Disposal for Businesses

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Introduction

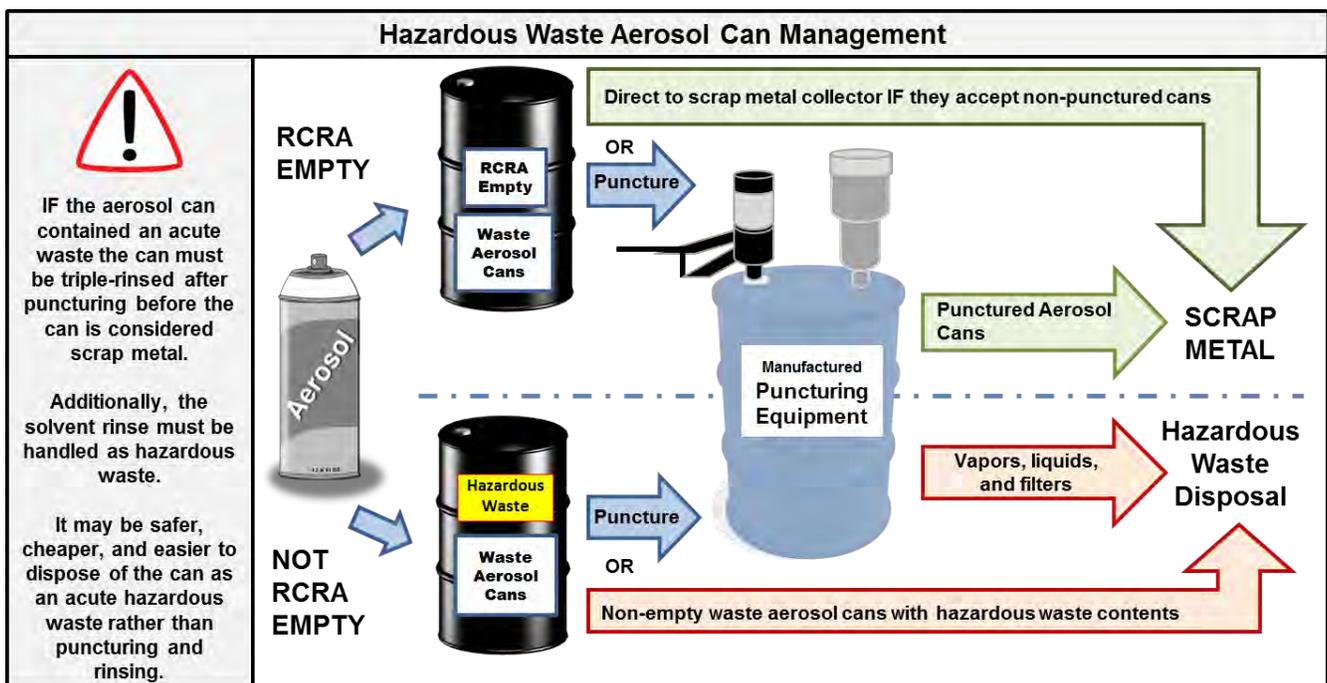
Aerosol spray cans contain product and propellant under pressure that can be dispensed as a spray, mist, or foam. Common aerosol can products include insecticides, cooking sprays, solvents, and paints. Most aerosol cans are made of recyclable steel or aluminum and can be easily managed as scrap metal when empty. However, when aerosol cans are unusable or cannot be emptied due to defective or broken spray nozzles the remaining liquids, vapors, or even the can itself, may be hazardous waste and subject to regulation. This publication provides waste management guidance to businesses generating hazardous waste aerosol cans.

Hazardous Waste Aerosol Cans

A waste aerosol can is any aerosol can that will no longer be used for its intended purpose. This typically does not include defective products that are returned to the retailer or manufacturer for refund or replacement. The handling of hazardous waste aerosol cans can pose risks to workers and the environment. While a small percentage of waste aerosol cans may not contain hazardous materials, the vast majority consist of contents under pressure which are flammable and may also be toxic. There are two options for managing hazardous waste aerosol cans:

- Containerize and label as hazardous waste and ship off-site to a licensed treatment, storage and disposal facility (TSD). A list of [licensed hazardous waste transporters](#) and [licensed hazardous waste TSD facilities](#) are available by searching “waste facility” at dnr.wi.gov.
- Collect the cans and manage them within the requirements and guidelines described in this document.

Below is a general representation of the management options and requirements for hazardous waste aerosol cans.



The following sections will define and discuss the “RCRA empty” determination, acute hazardous waste determination, storage requirements, puncturing, and waste reduction.

“ RCRA EMPTY ” DETERMINATION

According to the U.S Environmental Protection Agency’s Resource Conservation and Recovery Act (RCRA) waste aerosol cans are RCRA empty when they meet the following criteria:

1. The aerosol cans must contain no compressed propellant (i.e. the aerosol cans release no pressure through an open, working valve); and
2. All chemical product that can be dispensed through the valve has been dispensed (i.e. the aerosol can no longer sprays any product through an open, working valve); and
3. No more than 3% of the original capacity/net weight of the full container **or** no more than 1 inch of liquid residue remains in the aerosol can.
4. If the aerosol can contained an acute hazardous waste (P- listed, or F027) it **must be punctured and triple rinsed** using a solvent capable of removing the commercial chemical product. The solvent rinse must be managed as acute hazardous waste, it will count toward monthly generation totals, and if mixed with other residuals the entire contents of the container must be managed as acute hazardous waste. Special care should be taken when managing aerosol cans with acute hazardous wastes.

Do **NOT** discharge non-empty waste aerosol cans into the air to empty the can.

Once the waste aerosol can is RCRA empty, it is considered scrap metal and can be collected for recycling. While not a department requirement, the scrap metal marketer may require the RCRA empty waste aerosol cans to be punctured in order to confirm that they are empty.

ACUTE HAZARDOUS WASTE DETERMINATION

A hazardous waste aerosol can is an acute hazardous waste if the contents contain a P- listed commercial chemical product in [NR 661.33\(5\)](#) or [\(6\)](#), Wis. Adm. Code; OR if the contents contain a F027 listed waste from [Table 661.31\(1\)](#). As acute hazardous wastes pose serious health and environmental hazards it may be safer, cheaper, and easier to dispose of the can and residual contents as acute hazardous waste rather than puncturing and rinsing.

It is the responsibility of the generator to conduct waste determinations and to maintain waste determination records.

Facilities that have acute hazardous waste aerosol cans, and choose to puncture and triple rinse the cans to meet RCRA empty requirements, should collect the waste cans in separate containers prior to puncturing and follow the storage requirements listed below for managing aerosol cans that are not RCRA empty. Typical acute hazardous wastes found in aerosols include some unused poisons, pharmaceuticals and pesticides.

STORAGE REQUIREMENTS

Managing aerosol cans that are RCRA empty

RCRA empty waste aerosol cans stored for puncturing should be managed as follows:

1. Replace the cap/cover on the can or remove the nozzle in order to decrease potential release of fluids and vapors. Place the waste aerosol can in a container that is structurally sound and compatible with the contents of the can.
2. It is recommended to label the container as “RCRA empty waste aerosol cans” to identify the contents.

Managing aerosol cans that are not RCRA empty

Non-RCRA empty waste aerosol cans that are ready to be shipped as hazardous waste or stored for puncturing should be managed as follows:

1. Replace the cap/cover on the can or remove the nozzle in order to decrease potential release of fluids and vapors. Place the waste aerosol can in a container that is structurally sound and compatible with the contents of the can.

2. The container must be kept closed, unless aerosol cans are being added to or removed. For a satellite accumulation area, the container does not need a drum ring provided the lid makes full contact with the rim. At the end of the shift/day or at 180- or 90-day accumulation area, the drum ring must be fully closed and bolted (see [NR 665.1087\(3\)](#), Wis. Adm. Code).
3. Label container with the words “Hazardous Waste.”
4. Identify the container’s contents - such as marking or labeling “waste aerosol cans.”
5. A start date is required on any 270, 180, or 90-day accumulation drum, using the date when the first waste aerosol can is placed into the container.
6. It is recommended that metal containers be bonded and grounded. For more details, see NFPA 30 Flammable and Combustible Liquids Code and NFPA 77 Recommended Practice on Static Electricity.

For more information on container handling requirements see [NR 662.034\(3\)](#) or [662.192\(4\)](#), Wis. Adm. Code.

Hazardous waste shipped off-site to federally permitted or Wisconsin licensed TSD facilities must be counted in the monthly generation totals. These wastes would include waste aerosol cans shipped as hazardous waste and the liquids and filters generated during the puncturing process.

PUNCTURING

Hazardous waste aerosol cans should be punctured using manufactured equipment capable of capturing all vented or drained residuals and propellants. When puncturing is done in accordance with the manufactured equipment’s instructions, it is not considered hazardous waste treatment and is therefore not subject to licensing requirements. All puncturing equipment and associated residual collection containers should be properly bonded and grounded. The container connected to the puncturing device should be managed under satellite accumulation requirements.

When using manufactured puncturing equipment, there are additional considerations:

1. Adequate ventilation should be provided and no sources of ignition should be present.
2. Employers should make sure employees have proper training, protective clothing, and equipment.
3. No one may vent propellant from waste aerosol cans for disposal except as part of a legitimate puncturing and liquid/vapor-collection process.
4. **When puncturing waste aerosol cans mix only waste materials that are compatible** - those that will not combine to create an explosive mixture, release poisonous gases or create a dangerous situation.
5. Puncturing some aerosols such as ether, pesticides, chlorinated fluorocarbons (CFCs, commonly referred to as Freon), or corrosive cleaners, may be regulated or limited under other laws or may create dangerous situations. See the [Wisconsin Air Toxics Rule fact sheet \(AM-405\)](#) for details.
6. Puncturing equipment may be subject to Wisconsin Fire Prevention Code ([SPS 314](#), Wis. Adm. Code, which references the NFPA fire prevention standards) or local fire protection ordinances. Those who puncture waste aerosol cans should consult their local fire marshal for specifics.

A generator should assume a waste aerosol can to be at least a D001 (ignitable) hazardous waste.

Wastes generated during puncturing

Waste generated from puncturing hazardous waste aerosol cans, including residues or filters, will likely be hazardous waste and must be characterized, managed, and counted accordingly. It is recommended that the facility document (i.e. waste codes, chemicals) the wastes collected during puncturing in order to accurately manage the wastes and avoid potential violations of land disposal restrictions or shipping requirements.

REDUCING HAZARDOUS WASTE

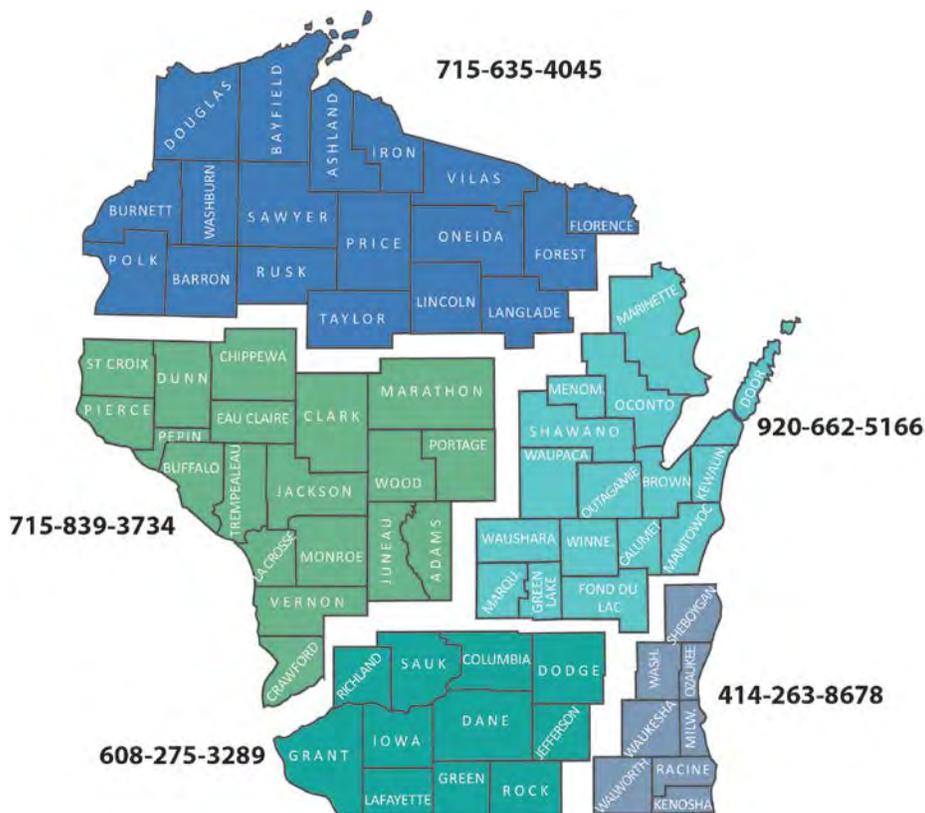
Generators can reduce their hazardous waste aerosol can generation by:

- Puncturing cans to divert scrap metal for recycling and handling of the residuals as hazardous waste;
- Purchasing products in quantities that will be used in a reasonable amount of time;
- Using rechargeable, pump-spray or refillable containers that use compressed air as the propellant instead of aerosols when possible;
- Using the entire product content of aerosol cans before the product's shelf life expires;
- Replacing products that contain hazardous materials with nonhazardous alternatives;
- Declining to accept free samples of aerosols that contain hazardous materials; and/or
- Returning defective aerosol cans which contain a hazardous product or propellant to the manufacturer.

Landfill disposal restrictions apply to steel canisters. RCRA empty steel and aluminum cans should be managed as scrap metal.

DNR CONTACT INFORMATION

For more information on this subject, including other publications, staff contacts and administrative codes and statutes, search by topic at dnr.wi.gov, contact Waste & Materials Management staff by searching [Hazardous Waste Staff](#) at dnr.wi.gov, or see below:



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