

Containers that held hazardous wastes or products

The Hazardous Waste Empty Container Standard

Why are containers that held hazardous wastes or products regulated?

Residues that remain in a container that held hazardous waste, or that held chemical products that would be hazardous wastes when disposed, can still present health and safety risks to your employees, the public, and the environment. The Minnesota Pollution Control Agency (MPCA) and the Metropolitan counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) regulate the management of container residues under the hazardous waste requirements.

What are containers?

Containers are portable devices used to store products and wastes. They range from pharmaceutical vials to railroad cars. Containers also include removable inner packaging that contacts a product or waste, such as foil wrappers and supersack liners. Containers do not include permanently-mounted tanks, contaminated personal protective equipment such as suits and gloves, or equipment used just to convey a product or waste, such as a spoon or conveyor belt.

When is a container empty for hazardous waste purposes?

Most containers that held hazardous waste, or products that would be hazardous waste when disposed, are considered *empty* for hazardous waste purposes, also known as being *RCRA-empty* or meeting the *empty container standard*, when **both**:

1. All material that can be removed by the method commonly used for that type of container has been removed. For example, if material is normally removed from a container by pouring, the container must be able to be overturned completely with no dripping; and
2. The container also meets the applicable requirement below:
 - If the container is 119 gallons or smaller, no more than 3% of the capacity by weight remains.
 - If the container is larger than 119 gallons, no more than 0.3% of the capacity by weight remains.
 - If the only residue is a tar or other extremely viscous material, no more than one inch remains.

However, additional or different requirements apply to containers that held:

- [Acute hazardous waste or products that would be acute hazardous wastes when disposed](#) on page 2.
- [Aerosols](#) on page 2.
- [Compressed gases that would be hazardous waste when disposed](#) on page 2.
- [Pesticides](#) on page 3.
- [Pharmaceuticals](#) on page 3.

Acute hazardous waste containers

Containers that held acute hazardous wastes or products that would be acute hazardous wastes when disposed, such as allyl alcohol or sodium azide, are considered empty only if they are triple-rinsed with a solvent capable of dissolving the waste or product. You may use water if it will fully dissolve the waste or product.

Manage the resulting *rinsate* from triple-rinsing as an acute hazardous waste. Wastewater rinsate may be able to be discharged to a sanitary sewer for disposal, if the receiving sewage treatment plant does not prohibit it, you notify them first, and you comply with any conditions they specify. See MPCA fact sheet #w-hw1-06, Treat or dispose of hazardous waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf>.

Remember to count acute hazardous waste rinsate when determining your site's generator size. See MPCA fact sheet #w-hw1-02, Determine Generator Size, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf>.

To identify acute hazardous wastes and products that would be acute hazardous wastes when disposed, see MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at <https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf>.

Aerosol containers

Aerosol containers are considered empty when **both**:

1. If the aerosol propellant would be an ignitable hazardous waste, such as propane, butane, or dimethyl ether (DME), then the container meets the [compressed gas cylinders](https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf) conditions below. For help identifying ignitable hazardous waste propellants, see MPCA fact sheet #w-hw2-04, Characteristic Hazardous Wastes, at <https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf>.
2. If the product in the aerosol container would be a listed or characteristic hazardous waste when discarded, such as paint or solvent, then the container meets the [empty container standard](https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf) on page 1. For help identifying listed and characteristic hazardous wastes, see MPCA fact sheet #w-hw1-01, Evaluate Waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

Because showing that an aerosol container meets these standards can be impractical, the MPCA will allow you to assume that an aerosol container with a working spray valve is empty when **both**:

1. No release of propellant or product is heard or seen when the valve is activated and the container rotated through all directions.
2. No liquid is felt or heard when the container is shaken by hand.

For guidance on how to handle aerosol containers that are not empty, see MPCA fact sheet #w-hw4-00, Waste Aerosols and Compressed Gas Cylinders, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf>.

Compressed gas cylinders

Cylinders of hazardous waste compressed gas and compressed gaseous products that would be hazardous waste when disposed, such as propane and acetylene, may be considered empty only when the pressure in the container is at or near atmospheric pressure. For help identifying listed and characteristic hazardous wastes, see MPCA fact sheet #w-hw1-01, Evaluate Waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

If the remaining contents of a compressed gas cylinder will be evacuated and used for their intended purpose or to fill other cylinders with the same contents for use, they may be considered products exempt from hazardous waste requirements.

For guidance on how to handle waste compressed gas cylinders that are not empty, see MPCA fact sheet #w-hw4-00, Waste Aerosols and Compressed Gas Cylinders, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf>.

Pesticide containers

Farmers and other pesticide end users may consider used pesticide containers empty if they:

1. Triple-rinse the pesticide container with an appropriate diluent or solvent.
2. Manage the resulting rinsate from triple-rinsing either by:
 - Use for the pesticide's intended use according to the pesticide label use instructions.
 - Disposal on the farm according to the pesticide label disposal instructions.

Triple-rinsed pesticide containers may be disposed as solid waste if allowed by the pesticide label instructions. The MPCA encourages pesticide container recycling if available. Contact the Minnesota Department of Agriculture for locations. See [More Information](#) on page 4.

Pharmaceutical containers

Pharmaceutical stock and dispensing containers, including inner packaging foils and blister packs, with a capacity of 10,000 tablets or one liter liquid or less may be considered empty for hazardous waste purposes after the contents have been removed by normal means for that container. No further rinsing or cleansing or measurement of residual is required.

Containers larger than 10,000 tablets or one liter liquid are subject to the normal [empty container standard](#).

Residue and rinsate removed from a container before it is empty

Any residue removed from a container before it meets the [empty container standard](#) is regulated the same way the original contents would have been.

Washing or rinsing a container creates used rinsing solvent or wastewater, called *rinsate*.

- Rinsate from listed hazardous waste or toxicity characteristic hazardous waste is hazardous waste.
- Rinsate from reactivity, ignitability, oxidizers, lethality, or corrosivity characteristic hazardous waste is hazardous waste unless you evaluate that it is not characteristic. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

Do not attempt to make the rinsate non-hazardous by using excessive amounts of rinsing solvent or water. Deliberate dilution of hazardous waste is considered treatment and is prohibited.

Residue and rinsate removed from a container after it is empty

Sometimes, waste may still be released or removed from a container after it has already met the [empty container standard](#), such as residue from crushing an empty container for recycling or rinsate from washing an empty container for reuse.

Waste released from a container after it met the empty container standard must be assumed to be hazardous waste unless you evaluate that it is not characteristic. Listings from former contents of the container do not carry over to after-empty waste. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

Note: Empty containers left standing outside can collect rainwater and snowmelt, even if the tops are closed. The water can pick up enough residues from the container to create a hazardous mixture. Prevent this by storing empty containers on their sides or under a roof.

Non-empty containers received back for reuse

Generators occasionally may receive containers that do not meet the [empty container standard](#) back from a hazardous waste disposal facility.

If the facility rejects your hazardous waste shipment, it may return the waste to you, accompanied by a hazardous waste manifest. This is called a rejected load and is allowed.

See MPCA fact sheet #w-hw1-06, Treat or Dispose Hazardous Waste, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf> for guidance in handling rejected loads.

However, sometimes the facility may inadequately clean your or another generator's shipped container before sending it back to you for reuse. This results in an illegal shipment of hazardous waste without a manifest. If you receive a hazardous waste container from your facility that does not meet the [empty container standard](#) when you receive it, document the occurrence and report it to the MPCA or Metro County. See [More information](#) below. Do not use the container. Though such incidents are rare, the MPCA recommends you always check hazardous waste containers received from your vendor before using them.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapter 7045, and incorporate regulatory interpretation decisions made on May 17, 2019. To review Minnesota Rules, visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs>.

For information about waste minimization, contact the Minnesota Technical Assistance Program (MnTAP). The MPCA's Small Business Environmental Assistance Program can offer free, confidential compliance assistance. Immediately report all hazardous waste spills that reach the environment to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka	763-324-4260
.....	https://www.anokacounty.us/
Carver	952-361-1800
.....	http://www.co.carver.mn.us/
Dakota	952-891-7557
.....	https://www.co.dakota.mn.us/
Hennepin	612-348-3777
.....	http://www.hennepin.us/
Ramsey	651-266-1199
.....	https://www.ramseycounty.us/
Scott	952-496-8177
.....	http://www.scottcountymn.gov/
Washington	651-430-6655
.....	https://www.co.washington.mn.us/

Minnesota Department of Agriculture

Toll free.....	1-800-967-2474
All offices	651-201-6000
.....	https://www.mda.state.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
All offices	651-296-6300
.....	https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free	1-800-422-0798
Metro	651-649-5451

Small Business Environmental Assistance Program

Toll free	1-800-657-3938
Metro	651-282-6143
.....	https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free	1-800-247-0015
Metro	612-624-1300
.....	http://www.mntap.umn.edu