
ENVIRONMENTAL Fact Sheet



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Waste Antifreeze: Management Requirements for Handlers and Transporters

Introduction

Antifreeze is used as an engine coolant and commonly consists of ethylene glycol or propylene glycol. Antifreeze breaks down over time and forms acids, which corrode the vehicle's cooling system. During its use, antifreeze may become contaminated with traces of fuel, metal particles, and grit. Benzene, lead and other hazardous constituents may cause used automotive antifreeze to be characterized as a hazardous waste.

Types of Antifreeze Recycling

Recycling methods include filtration, distillation and ion exchange. Distillation and ion exchange restore the antifreeze to a high level of purity. Some major vehicle manufacturers allow antifreeze recycled by these methods to be used in vehicles under warranty. Check with vehicle manufacturers for more information. Simple filtration processes are not designed to remove dissolved contaminants. However, use of very fine filters or a series of filters, followed by the addition of chemicals to refortify the antifreeze, such as rust and corrosion inhibitors, acid neutralizers, anti-clogging and anti-foaming agents, and pH buffers, can result in a product that meets the American Society of Testing and Materials (ASTM) standards.

Requirements for Managing Waste Antifreeze

Universal Waste

"Universal wastes" are wastes that meet the definition of hazardous waste in the New Hampshire Hazardous Waste Rules, but that, during accumulation and transport, pose a relatively low risk compared to other hazardous wastes. Wastes that the Department of Environmental Services (NHDES) has determined meet universal waste criteria include antifreeze, mercury-containing lamps and devices, cathode ray tubes (CRTs), certain types of batteries, and recalled or suspended hazardous waste pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Generator Status

If waste antifreeze and other universal wastes are managed in accordance with the Universal Waste Rule, Env-Hw 1100, such wastes do not need to be included in the calculation of hazardous waste generator's status (see Env-Hw 503 of the Hazardous Waste Rules). Universal wastes, when recycled, are also not subject to the generator fee at Env-Hw 512.02.

Universal Waste Consolidation

A facility may collect waste antifreeze from other sites or generators without a permit provided the facility meets the handler requirements covered in the Universal Waste Rule Env-Hw 1101-1114 and complies with other applicable federal, state, and local regulatory requirements.

Recycling/Disposal Options and Prohibitions

On-site recycling at a generator's facility is not subject to permitting requirements. Generators may purchase an antifreeze distillation or filtration unit and recycle their own antifreeze on-site, hire a contractor to come in with a mobile recycling unit, or ship the antifreeze to a recycling facility.

Waste Antifreeze Mixtures

Waste antifreeze should not be mixed with used oil or other hazardous wastes, such as gasoline or solvents. Waste antifreeze mixed with any other material may lose its ability to be recycled and may be subject to the full requirements of the Hazardous Waste Rules. In order to avoid contamination of antifreeze with other wastes, do not use collection equipment and storage containers, which have been previously used to collect other hazardous wastes or materials, unless the equipment has been decontaminated. This includes collection funnels, transfer pans, or buckets, drums, and tanks.

Filters and Sludges

Any filters or sludges generated from the antifreeze recycling process must be evaluated as to whether they are hazardous wastes and managed accordingly. Refer to the Hazardous Waste Rules, Env-Hw 502 for hazardous waste determination requirements.

A recycling contractor who removes a spent antifreeze filter and sludges from a recycling unit at his or her own facility becomes the generator of these wastes. If the contractor brings a mobile recycling unit to a waste antifreeze generator's site and removes a filter and sludges from the recycling unit at the generator's site, then one of the following alternatives must be chosen:

- (a) The recycling contractor becomes the generator of the spent filter and sludges and transports them back to his or her site where s/he will perform a hazardous waste determination; or
- (b) The contractor may leave the filter and sludges with the waste antifreeze generator who then becomes the generator of the spent filter and sludges.

Prior arrangements should be made between the waste antifreeze generator and the contractor as to which of these options will be chosen. In either case, these wastes must be managed in accordance with the Hazardous Waste Rules.

Requirements for Handlers

A "handler" of waste antifreeze means: (1) a generator of universal waste antifreeze; or (2) an owner or operator of a facility that receives universal waste antifreeze from other handlers, accumulates the antifreeze, and sends the antifreeze to another handler or to a destination facility. Handlers of universal waste antifreeze must either meet the following standards or comply with the generator and/or facility requirements of the Hazardous Waste Rules.

1. Release Prevention

Manage waste antifreeze in a way that prevents releases of antifreeze to the environment.

2. Quantity Limits

Universal waste handlers are either very large, large, or small quantity handlers:

- a. Small Quantity Handlers - accumulate less than 5,000 kilograms (approximately 11,000 pounds) of combined universal wastes on-site at any time. 5,000 kilograms of antifreeze is equivalent to approximately 1,250-gallons.
- b. Large Quantity Handlers - accumulate 5,000 kilograms or more, but less than 20,000 kilograms, of combined universal wastes at any one time and must also comply with Env-Hw 1104 described in this fact sheet in the section titled, *Additional Requirements for Large Quantity Handlers*.

- c. Very Large Quantity Handlers – accumulate 20,000 kilograms or more of combined universal wastes at any one time and must also comply with Env-Hw 1104 and Env-Hw 1105 described in this fact sheet in the section titled, *Additional Requirements for Very Large Quantity Handlers*.

3. Labeling

Clearly label or mark each container or tank of waste antifreeze with any one of the following phrases: “Universal Waste – Antifreeze,” or “Waste Antifreeze,” or “Used Antifreeze.”

4. Containers and Tanks

Accumulate waste antifreeze in containers or tanks that are structurally sound, compatible with the antifreeze, and are closed at all times except when antifreeze is being added to or removed from the container. The containers must not show evidence of leakage, spillage, or damage. Containers stored outside shall be covered to prevent precipitation from coming in contact with the waste.

5. Accumulation Time Limits

- a. Accumulate waste antifreeze for no longer than one year from the date the waste antifreeze is generated or received from another handler.
- b. Demonstrate the length of time that the waste antifreeze has been accumulated from the date the waste antifreeze became waste or were received. The handler may make this demonstration by:
 - (1) Marking or labeling containers with the starting accumulation date; or
 - (2) Maintaining an inventory system on-site that identifies the earliest date that waste antifreeze was added to a container or received from off-site.

6. Training

Ensure that all employees who handle or have responsibility for managing waste antifreeze are thoroughly familiar with the handling and emergency procedures appropriate to antifreeze.

7. Response to Releases

Immediately contain and clean up all releases of antifreeze.

Manage any residues resulting from the cleanup of antifreeze spills or leaks that exhibit a characteristic of hazardous waste, in accordance with the Hazardous Waste Rules. The handler is considered the generator of the residues and other clean-up waste and must meet the requirements of Env-Hw 500.

Any releases that pose a threat to human health or the environment must be reported immediately to NHDES at (603) 271-3899, Monday through Friday, 8 am to 4 pm or to New Hampshire Department of Safety (DOS) at (603) 223-4381, 24 hours/day and to the municipality in which the release occurred.

8. Off-Site Shipments

- a. Handlers are prohibited from sending or taking waste antifreeze to a place other than another universal waste handler, an antifreeze recycling facility, or an authorized hazardous waste facility.
- b. Prior to sending a shipment of waste antifreeze to another handler or destination facility, the originating handler must ensure that the receiving handler agrees to receive the shipment.
- c. Shipments must meet all applicable United States Department of Transportation (USDOT) and DOS regulations for antifreeze.
- d. If a waste antifreeze shipment is rejected by an intermediate handler or destination facility, arrangements must be made by the originating handler to:
 - (1) Receive the waste antifreeze back when notified that the shipment has been rejected, or
 - (2) Send the device shipment to an alternate facility.

9. Exports

A handler of waste antifreeze who sends the devices to a foreign destination must comply with the requirements for international shipments as set forth in Env-Hw 1102.08 of the Universal Waste Rule.

Additional Requirements for Large Quantity Handlers

A handler who accumulates 5,000 kilograms or more of combined universal wastes must comply with Env-Hw 1104. These requirements include:

1. Prior to collecting 5,000 kilograms or more of combined universal wastes, notify NHDES of this activity and obtain an EPA Identification Number if one has not already been obtained.
2. Keep records for three years on each shipment of waste received or sent. These records must include:
 - a. The date of each shipment.
 - b. The quantities of each shipment.
 - c. The name and address of the handler or facility from which waste antifreeze were received or shipped to.

Additional Requirements for Very Large Quantity Handlers

A handler who accumulates 20,000 kilograms or more of combined universal wastes must comply with Env-Hw 1104 and Env-Hw 1105. These requirements include:

1. Submit a notification form for each on-site location where universal waste is accumulated.
2. Ensure universal waste is not stored within a 100-year floodplain.
3. Complete and document weekly inspections of all universal waste storage areas.
4. Establish and post contingency plans and emergency procedures and provide emergency response equipment.
5. Post emergency response information at each universal waste storage area and provide access security measures to universal waste storage areas.
6. Provide closure plans and sufficient financial assurance for closure.

Requirements for Transporters

1. Transporters are not required to obtain a New Hampshire hazardous waste transporter registration or use a hazardous waste manifest for waste antifreeze, but must meet all applicable USDOT and DOS regulations.
2. Transporters are prohibited from sending or taking waste antifreeze to a place other than:
 - a. another handler;
 - b. an antifreeze recycling facility; or
 - c. an authorized hazardous waste facility.
3. Staging During Transportation
 - a. Transporters who remove waste antifreeze from their vehicles and stage them temporarily are not required to obtain a hazardous waste transfer facility permit, but are subject to US DOT and DOS regulations.
 - b. Transporters who stage waste antifreeze for more than 10 days must also meet universal waste handler requirements.
 - c. Transporters must not stage more than a combined total of 5,000 kilograms (approximately 11,000 pounds) of waste antifreeze and other universal wastes on-site at any time.

For more information

Questions regarding this fact sheet should be directed to the NHDES, Waste Management Division at (603) 271-2942 or toll free within New Hampshire at 866-HAZWAST. For a complete description of the requirements, refer to the New Hampshire Hazardous Waste Rules, Env-Hw 100-1200, available from NHDES' website at www.des.nh.gov.