

Hazardous Waste Labeling and Marking – Quick Tips



A critical step in the safe handling of hazardous waste is labeling and marking all containers appropriately. To help ensure uniformity in the labeling and marking of containers used for hazardous waste, both the U.S. Department of Transportation (DOT) and U.S. Environmental Protection Agency (EPA) offer specific regulatory guidance for hazardous waste generators to follow. It is important to note that these requirements are different from the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 Code of Federal Regulations (CFR) 1910.1200, which offers labeling guidance for hazardous materials that have not been

designated as waste.

DOT Bulk vs. Non-Bulk Packaging

The DOT hazardous waste labeling and marking requirements are different based on the size of the container. Per 49 CFR 171.8, packaging means a receptacle and any other components or materials necessary for the receptacle to perform its containment function.

Non-Bulk Packaging

Non-bulk packaging is defined as packaging that has:

- A maximum capacity of 450L (119 gal.) or less as a receptacle for a liquid
- A maximum net mass of 400kg (882 lbs.) or less and a maximum capacity of 450L (119 gal.) or less as a receptacle for a solid
- A water capacity of 454kg (1000 lbs.) or less as a receptacle for a gas as defined in 49 CFR 173.115

Bulk Packages

Under 49 CFR 171.8, a bulk package is defined as a packaging, other than a vessel or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment. Bulk packaging is also defined as large packaging in which hazardous materials are loaded with an intermediate form of containment, such as one or more articles or inner packagings. Additionally, a bulk package has:

- A maximum capacity greater than 450L (119 gal.) as a receptacle for a liquid
- A maximum net mass greater than 400kg (882 lbs.) and a maximum capacity greater than 450L (119 gal.) as a receptacle for a solid
- A water capacity greater than 454kg (1000 lbs.) as a receptacle for a gas as

While the DOT guidelines for properly labeling and marking non-bulk and bulk containers are similar, they are not the same. This document outlines the rules for non-bulk packaging.

Hazardous Waste Labeling vs. Marking

The DOT reference to a label is very specific. Labels are the diamond-shaped labels placed on non-bulk containers and resemble bulk container placards. Everything else on a non-bulk package is a marking.

Hazardous Waste Labeling

The design and size of labels are based on international standards and are used to identify the hazards within the container. Each diamond (square-on-point) label measures at least 100mm (4" x 4") on each side as prescribed in 49 CFR 172.407(c)(1).

DOT Hazardous Waste Label Examples:



Placement of Hazardous Waste Labels

The proper placement of labels is important. Labels must be printed on or affixed to a surface (other than the bottom) of the package and located on the same surface of the package and near the markings, if the package dimensions are adequate.

Multiple Hazardous Waste Labels

When primary and subsidiary hazard labels are required, they must be displayed next to each other. The DOT recommends a six-inch space (150mm) between labels.

Hazardous Waste Labels and Overpacking

Whenever hazardous material packages are overpacked, the inner containers must be properly labeled in accordance with DOT shipping requirements for the hazardous material. The same applies to the overpack container.

Hazardous Waste Markings

Marking is a critical process in preparing hazardous materials for transportation. A marking on a hazardous materials package contains important information about the identification and dangers posed by the hazardous material. While there is no standardized hazardous waste marking format, both the DOT and EPA have specific requirements.

According to 49 CFR 172.304 markings must:

- Be durable
- Be in English
- Be printed on or affixed on the package surface or on a label, tag or sign
- Be displayed on a contrasting color background
- Not be obscured or covered up by other labels or attachments
- Not be located next to any other markings (such as advertisement) that would limit their effectiveness

Hazardous Waste Markings and Overpacking

Whenever hazardous material packages are overpacked, the inner containers and the overpack container must be properly marked in accordance with DOT shipping requirements for the hazardous material.

DOT Hazardous Waste Marking Requirements

49 CFR 172.301 identifies the general DOT marking requirements for a non-bulk package:

- Proper shipping name and identification number
- Technical names (if required)
- Special permit number
- Consignor's or consignee's name and address
- NON-ODORIZED marking on cylinders containing liquefied petroleum gas (LPG) (if required)

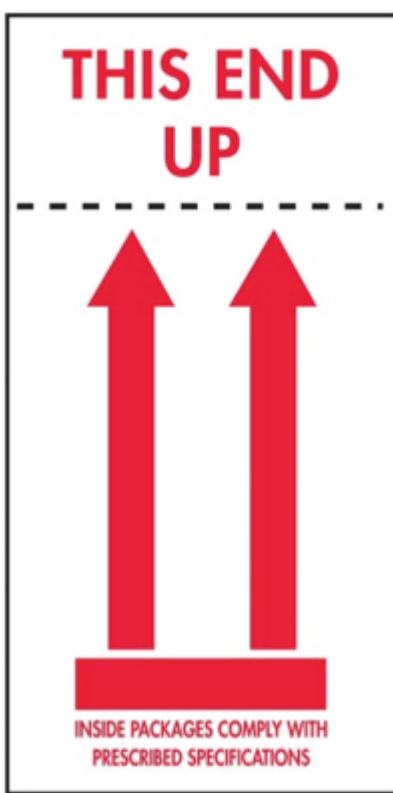
Other DOT Non-Bulk Package Markings

Along with the hazardous waste marking requirements, there may be additional markings that are required. For example:

This End Up Marking

This marking is the package-orientation marking. It is applied to any package that holds inner containers of liquid hazardous materials. Inner packaging may be non-specification containers made of glass or earthenware, plastic or metal.

All packages having inner packages containing liquid hazardous materials must be packed with their closures upward and legibly marked with package-orientation arrows on two opposite vertical sides and with the arrows pointing in the correct upright direction. Arrows for purposes other than indicating proper package orientation may not be displayed on a package containing a liquid hazardous material.



EPA Hazardous Waste Marking Requirements

The EPA, under 40 CFR 262.32, requires certain information to be marked on containers of 119 gal. or less used in transportation. This information is listed below:

- **Hazardous Waste Warning Statement**

The following statement must be included on non-bulk packages: **HAZARDOUS WASTE: Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.**

- **Generator's Name and Address**

This is the same as the consignor's address.

- **Generator's EPA Identification Number**

This is a 12-digit number assigned by the EPA to each hazardous waste generator. It is also included on the hazardous waste manifest.

- **Manifest Tracking Number**

This tracking number must consist of a unique three-letter suffix following nine digits. It is unique for each shipment.

Accumulation Start Date

This date is determined by the generator. It is the date that the generator first placed a hazardous waste inside the package. As addressed in 40 CFR 262.34, there are time limits related to the amount of time a generator can accumulate hazardous waste at its site. Consequently, this date is very important.

EPA Waste Number

In order for a hazardous material to be classified as a waste, it must carry an EPA waste number. Waste numbers provide more information regarding the specific hazards associated with the waste. For more information on identifying the proper waste number, refer to 40 CFR 261.

Hazardous Waste Marking Example:

1. Hazardous warning statement
2. Generator name and address
3. Generator EPA ID number
4. Accumulation start date
5. EPA waste number
6. Manifest tracking number
7. Proper shipping name, technical name, special hazard warning (if applicable) and DOT special permits (if applicable)

HAZARDOUS WASTE

FEDERAL LAWS PROHIBIT IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR
PUBLIC SAFETY AUTHORITY OR THE
U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERATOR INFORMATION:

NAME: _____

ADDRESS: _____

CITY _____ STATE _____ ZIP _____

EPA ID NO. _____ EPA WASTE NO. _____

ACCUMULATION START DATE _____ MANIFEST TRACKING NO. _____

[_____]

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

In addition to the federal marking requirements, there may also be state or local requirements that apply. Contact your state EPA officials to find out if there are any additional requirements that you need to meet.

Commonly Asked Questions

Q: How do you go about obtaining an EPA Identification Number?

A: Federal regulations require large and small quantity generators of hazardous waste to obtain an EPA Identification (EPA ID) number using EPA Form 8700-12 and to submit the completed form to the authorized state agency or EPA regional office if the state is not authorized to implement the Resource Conservation and Recovery Act Subtitle C program. The Site Identification Form (EPA Form 8700-12) includes information such as:

- Facility's name and address,
- Contact information, and
- A description of hazardous waste activities conducted at the site

Sources

Hazardous Waste Generator Regulations: A User-Friendly Reference Document

49 CFR 172.101 Subpart B, *Purpose and use of hazardous materials table and Table of Hazardous Materials*

49 CFR Subchapter C – Hazardous Materials Regulations, Parts 171-177

49 CFR 172.300 *Subpart D, Marking and Applicability*

49 CFR 172.400 *Subpart E, Labeling*

49 CFR 172.400(b) *General Labeling Requirements Table*

49 CFR 172.402 *Additional Labeling Requirements*

49 CFR 173 *Definitions, Classifications, Packing Group Assignments and Exceptions for Hazardous Materials Class 1 and Class 7*

40 CFR 260-262 *Hazardous Waste Management System General, Identification and Listing*

Quick Tips #155: Performance-Oriented Packaging Standard

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