
Instructions for Handling Hazardous Materials – Intermodal Gate Operations

November 20, 2011

The ***Instructions for Handling Hazardous Materials – Intermodal Gate Operations*** should be interpreted and used as general guidelines. For further information, appropriate regulations must be consulted.

The Association of American Railroads (AAR), the Bureau of Explosives (BOE), and the AAR Hazardous Materials (BOE) Committee are not responsible for any omissions or errors found in the ***Instructions for Handling Hazardous Materials – Intermodal Gate Operations***.

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INTRODUCTION

1. Policy

Gate clerks (employees and contractors) must comply with these Instructions when handling trailers/containers (both freight and tank containers) transporting hazardous materials during intermodal gate operations. These Instructions describe how gate clerks do their job safely and in compliance with federal and international regulations including:

- a. U. S. Department of Transportation's (DOT) **Hazardous Materials Regulations** (49 CFR 171-180)*,
- b. **International Maritime Dangerous Goods Code** (IMDG Code), and
- c. Canadian **Transportation of Dangerous Goods Regulations** (TDGR).

*These regulations are also published in **Bureau of Explosives Tariff No. BOE-6000**.

DOT regulates rail transportation in the United States through the Federal Railroad Administration (FRA).

2. Responsibilities of Gate Clerks

In addition to their normal duties, gate clerks (employees or contractors) must take the following actions when accepting or releasing trailers/containers transporting hazardous materials:

- a. Recognize trailers/containers transporting hazardous materials **Section II**
- b. Accept trailers/containers transporting hazardous materials that are properly prepared for rail transportation; reject trailers/containers transporting hazardous materials that are not properly prepared.

Required Tasks

- (1) Verify availability of required shipping papers (billing) **Section III**
- (2) Verify that shipping papers have appropriate shipping description entries **Section III**
- (3) Verify that trailers/containers transporting hazardous materials are not leaking **Section IV**
- (4) Verify that trailers/containers transporting hazardous materials are properly placarded **Section V**
- (5) Verify that trailers/containers transporting hazardous materials are properly marked **Section VI**
- c. Release trailers/containers transporting hazardous materials that are properly prepared for transportation by highway or water; do not release trailers/containers transporting hazardous materials that are not properly prepared.

Required Tasks

- (1) Verify availability of required shipping papers (billing) **Section III**
- (2) Obtain the shipping papers and verify they have appropriate shipping description entries **Section III**
- (3) Offer the drayman the shipping papers and, when requested, provide emergency response information **Section III**

-
- (4) Verify that trailers/containers transporting hazardous materials are not leaking**Section IV**
 - (5) Verify that trailers/containers transporting hazardous materials are properly placarded**Section V**
 - (6) Verify that trailers/containers transporting hazardous materials are properly marked**Section VI**
 - d. Take initial actions at releases or potential releases of hazardous materials.....**Section VII**

3. Training Requirements

Gate clerks (employees and contractors) must be trained and tested in an appropriate manner in the regulations within 90 days of being assigned to a job involving hazardous material and once every three (3) years thereafter. Training must include:

- a. General awareness/familiarization training
- b. Function-specific training
- c. Safety training
- d. Security awareness training and in-depth security training, as applicable

New gate clerks (employees and contractors) may work under direct supervision of a trained employee or contractor for the initial 90 day period.

4. Safety Equipment to be Worn

Gate clerks (employees and contractors) making inspections of intermodal shipments of hazardous materials must wear the following personal protective equipment:

- a. Hard hat
- b. Safety glasses / prescription glasses with side shields
- c. Reflectorized vest
- d. Footwear must have a definite heel and must cover the ankle (*no gym shoes, sandals, thin-soled, or high heels*).

SECTION I. GENERAL

1. General Requirements

No person may offer, accept, or transport a hazardous material in commerce unless that material is properly classed, described, packaged, marked, labeled, and placarded and is in proper condition for transportation according to DOT regulations and international regulations.

- a. DOT regulates the transportation of hazardous material. DOT's regulations are found in the **Hazardous Materials Regulations** (49 CFR Parts 171-180). These regulations are designed to:

- (1) Prevent accidents involving hazardous material;

- and

- (2) Minimize the impact of accidents that do occur.

- b. DOT's regulations explain the requirements for:

- (1) Properly classifying, describing, packaging, marking, labeling, and preparing hazardous material shipments for transportation;

- (2) Handling and transporting hazardous material shipments in commerce;

- (3) Reporting unintentional releases of hazardous material;

- (4) Training employees involved in the transportation of hazardous materials.

Note: Railroads publish information on restrictions which they impose against the acceptance, delivery, or transportation of hazardous materials. Refer to Intermodal Restrictions for Hazardous Materials found in the current issue of **Bureau of Explosives Tariff No. BOE-6000**.

2. Hazardous Materials

- a. Hazardous materials are defined as “a substance or material which the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce.”

- b. The term “hazardous material” includes hazardous substances, hazardous wastes, elevated temperature materials, and marine pollutants.

3. Classifying Hazardous Materials

Hazardous materials are classified according to their chemical and/or physical properties. There are nine numeric hazard classes, some of which are divided into divisions, and two worded hazard classes. A hazardous material is assigned to only one primary hazard class/division, even if it meets the definition of more than one hazard class/division. Table 1 (Page 8) lists the hazard classes and divisions.

4. Exceptions for U.S. Government Material

Department of Energy (DOE) and Department of Defense (DOD) shipments made for the purpose of national security and accompanied by escorts (personnel specifically designated by or under the authority of DOD or DOE) are not subject to DOT regulations or to the instructions in this book.

Table 1. Hazard Classes and Divisions

Numbered Hazard Classes and Divisions

1 - Explosives

- 1.1 – Explosive with mass explosion hazard
- 1.2 – Explosive with projection hazard
- 1.3 – Explosive with predominantly fire hazard
- 1.4 – Explosive with no significant blast hazard
- 1.5 – Very insensitive explosive; blasting agent
- 1.6 – Extremely insensitive detonating substance

2 - Gases

- 2.1 – Flammable gas
- 2.2 – Nonflammable, nonpoisonous (nontoxic) compressed gas
- 2.3 – Gas poisonous (toxic) by inhalation

3 - Flammable Liquids

4 - Flammable Solids and Reactive Solids/Liquids

- 4.1 – Flammable solid
- 4.2 – Spontaneously combustible material
- 4.3 – Dangerous when wet material

5 - Oxidizers and Organic Peroxides

- 5.1 – Oxidizer
- 5.2 – Organic peroxide

6 - Poisonous (Toxic) Materials and Infectious Substances

- 6.1 – Poisonous (toxic) material
- 6.2 – Infectious substance

7 - Radioactive Materials

8 - Corrosive Materials

9 - Miscellaneous Hazardous Materials

Worded Hazard Classes (US Only)

Combustible Liquids (*regulated in bulk packages; also regulated in non-bulk packages if a hazardous substance, hazardous waste or marine pollutant*)

ORM-D (Other Regulated Materials – D) – (*exempt from placarding and labeling in rail transportation, but subject to packaging, marking, and possibly shipping paper requirements*)

5. International Shipments

Trailers/containers transporting hazardous materials internationally (including shipments to and from Canada and Mexico), moving with proper International documents and International placards, may be transported in the United States (U.S.) under the specific regulations (IMDG Code, TDGR) from origin to destination as long as they are in complete compliance with the specific regulations and meet DOT restrictions.

SECTION II. RECOGNIZING HAZARDOUS MATERIALS

1. General Requirements

Gate clerks (employees and contractors) involved with the transportation of hazardous materials must be able to recognize trailers/containers transporting hazardous materials.

As a trailer/container approaches the gate house, gate clerks must take one or more of the following actions to see if hazardous materials are present:

- a. Look for placards;
- b. Look for markings;
- c. Check to see if internal billing indicates hazardous material;
- d. Review the hard copy shipping papers for hazardous material entries; and/or
- e. Ask the drayman if there are any hazardous materials in the shipment.

2. Look for Placards on the Trailer/Container

As the trailer/container approaches your location and during your inspection, look for placards which may indicate it contains hazardous materials.

Placard - a sign measuring 10.8 in (273 mm) by 10.8 in (273 mm) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text.

Note: A placard meeting IMDG Code requirements [minimum of 9.8 in (250 mm) by 9.8 in (250 mm)] is acceptable.

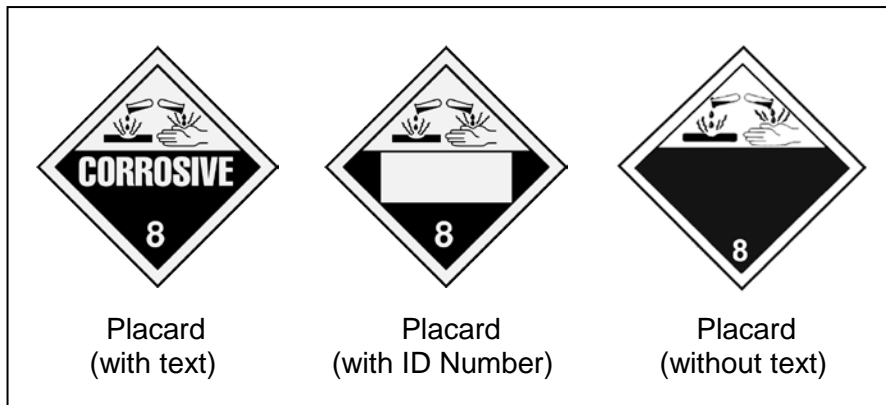


Figure 1. Placard Types

3. Look for Markings on the Trailer/Container

As the trailer/container approaches your location and during your inspection, look for markings which may indicate it contains hazardous materials.

Marking - a descriptive commodity name, identification number, instructions, cautions (such as marine pollutant, inhalation hazard, elevated temperature material, limited quantities, fumigant, non-odorized), weight, specification, or UN marks, or combinations thereof, required for display on trailers/containers transporting hazardous materials.

-
- a. **Commodity Name** - the proper shipping name of the material stenciled in 2-inch letters on both sides of tank containers.

Note: The commodity name is also found on tank containers that do not transport hazardous materials.

- b. **Identification Number** (four-digit number found in one of the formats below)

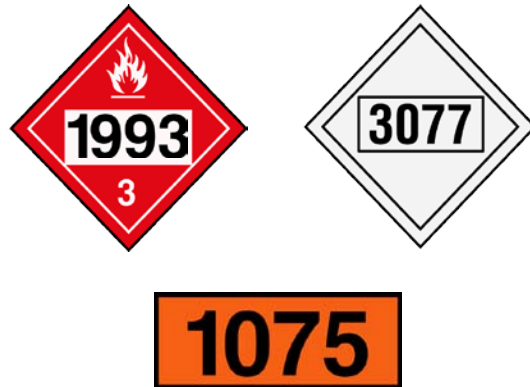


Figure 2. Identification Numbers

- c. **MARINE POLLUTANT Mark**



Figure 3. MARINE POLLUTANT Mark

- d. **INHALATION HAZARD Mark** - the words INHALATION HAZARD stenciled on both sides of the trailer/container.
- e. **Elevated Temperature Material Mark** (only regulated when transported in bulk packages) - the following marks are valid:
- (1) the word HOT stenciled on both sides of the trailer/container
 - (2) the words MOLTEN SULFUR (or MOLTEN SULPHUR) or MOLTEN ALUMINUM (or MOLTEN ALUMINIUM), as appropriate, stenciled on both sides of the trailer/container
 - (3) the international elevated temperature material symbol shown below
 - (4) the word HOT displayed on either of the marks below

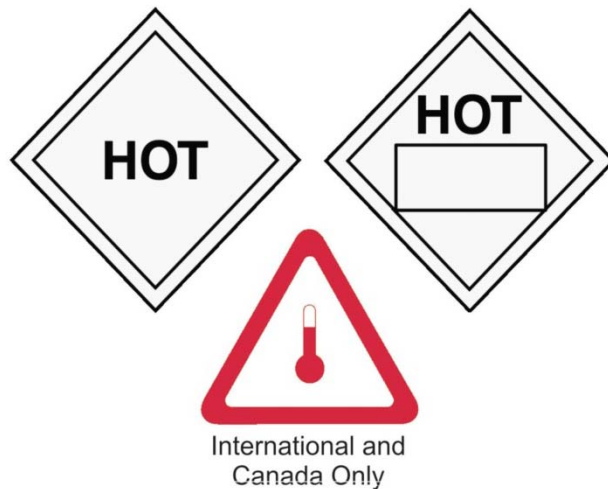


Figure 4. Elevated Temperature Material Mark

- f. **LIMITED QUANTITIES Mark** (applies when vessel transportation is involved with the shipment) – a square-on-point with black border, top, and bottom displayed on at least one side or end of trailers/containers.



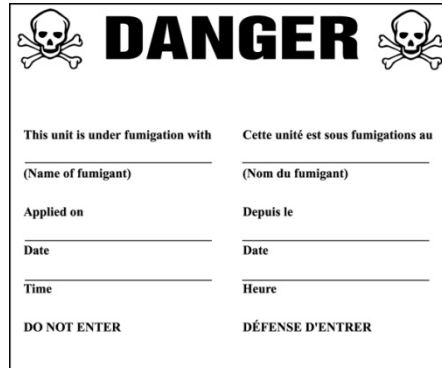
Figure 5. LIMITED QUANTITIES Mark

Note: The words LIMITED QUANTITIES or LTD QTY displayed on both sides and both ends of trailers/containers may be used until January 1, 2012.

- g. **FUMIGANT Mark** – marking indicating that the container is moving under fumigation.



United States of America



Canada



International

Figure 6. FUMIGANT Mark

- h. **NON-ODORIZED Mark** [for non-odorized liquefied petroleum gas (LPG)] – the words NON-ODORIZED or NOT ODORIZED displayed on opposing sides of tank containers.

4. Check for Internal Billing Information in Computer
(per individual railroad's current procedures)

5. Review Shipping Description Entries for Indications of Hazardous Materials

- a. Check the shipping description entries on the internal billing information in the computer and/or on the shipping papers from the drayman.

Shipping paper *(for hazardous material shipments)* - any document providing the appropriate shipping description entries for a hazardous material shipment. *(See Section III)*

- b. Look for one or more of the following entries which indicate hazardous material:

- (1) Proper shipping name
- (2) Numbered or worded hazard class/division (See Table 1, page 8)
- (3) Identification number (four digit number with the prefix UN or NA)
- (4) Packing group ("PG I", "PG II", or "PG III" or "I", "II", or "III")
- (5) Emergency response telephone number
- (6) Letters "RQ" (stands for Reportable Quantity)
- (7) Words: "MARINE POLLUTANT", "POISON (TOXIC)", "POISON (TOXIC)-INHALATION HAZARD" or "INHALATION HAZARD"
- (8) Hazard zone notation ("ZONE A", "ZONE B", "ZONE C", or "ZONE D")

Example - Shipping Description Entries

APLU 12345 (a)
10 BOX / 350 LBS (b), UN1830 (e), SULFURIC ACID (c), 8 (d), PG II (f),
EMERGENCY CONTACT: 800-424-9300 (g)

Letters in parenthesis refer to required entries
[See Section III, 3a through 3g, pages 16-17].

Figure 7. Example of Shipping Description Entries

6. Ask Drayman

- a. Ask the drayman if there are any hazardous materials in the shipment.

SECTION III. REQUIRED DOCUMENTATION

1. General Requirements

Hazardous material shipments, whether loaded or containing a residue, must not be accepted for rail transportation, transported by rail, or released for highway transportation without having accurate and complete **shipping papers** and **acceptable emergency response information**.

a. Shipping papers

The carrier is required to have a copy of accurate and complete shipping papers for any hazardous material shipment: [A shipping paper (for hazardous material shipments) is any document providing the shipping description entries for the hazardous material being transported as required by DOT or international regulations.]

- (1) When accepting a hazardous material shipment, the railroad must receive accurate and complete shipping papers in either electronic or hard copy form.
- (2) When in rail transportation, all required shipping papers and emergency response information must be in hard copy.
- (3) When offering a hazardous material shipment to a highway carrier, the railroad must provide a hard copy of accurate and complete shipping papers to the highway carrier. If requested by the highway carrier, a hard copy of the emergency response information will be provided.

b. Emergency Response Information

The carrier is required to have immediately available accurate and complete emergency response information for any hazardous material shipment it has in its possession.

Any of the following documents is acceptable emergency response information:

- (1) ***Emergency Response Guidebook (ERG)***
- (2) Supplementary emergency response information printed as part of the train list/consist.

2. Check for Internal Billing Information in Computer *(per individual railroad's current procedures)*

3. Review Shipping Description Entries *(per individual railroad's current procedures)*

Check the shipping description entries on the internal billing information in the computer and/or on the shipping papers from the drayman to make sure that the required entries (Figure 8, page 15 and items a through g, pages 16-17) are present.

Vertical Format (allowed until January 1, 2013)

APLU 12345 ^(a)
1 TNK ^(b)
SULFURIC ACID ^(c)
8 ^(d)
UN1830 ^(e)
PG II ^(f)
RQ (SULFURIC ACID) ^(h3)
EMERGENCY CONTACT: 800-424-9300 ^(g)
HAZMAT STCC = 4930040 ^(h11)

Vertical Format (optional until January 1, 2013 and mandatory thereafter)

APLU 12345 ^(a)
1 TNK ^(b)
UN1830 ^(e)
SULFURIC ACID ^(c)
8 ^(d)
PG II ^(f)
RQ (SULFURIC ACID) ^(h3)
EMERGENCY CONTACT: 800-424-9300 ^(g)
HAZMAT STCC = 4930040 ^(h11)

Horizontal Format (allowed until January 1, 2013)

APLU 678910 ^(a)
8 CYL ^(b) // CHLORINE ^(c) // 2.3 (5.1, 8) ^(d) // UN1017 ^(e) // RQ (CHLORINE) ^(h3) // POISON-
INHALATION HAZARD ^(h6) // ZONE B ^(h7) // MARINE POLLUTANT (CHLORINE) ^(h4) //
EMERGENCY CONTACT: 800-424-9300 ^(g) // HAZMAT STCC = 4920523 ^(h11)

Horizontal Format (optional until January 1, 2013 and mandatory thereafter)

APLU 678910 ^(a)
8 CYL ^(b) // UN1017 ^(e) // CHLORINE ^(c) // 2.3 (5.1, 8) ^(d) // RQ (CHLORINE) ^(h3) // POISON-
INHALATION HAZARD ^(h6) // ZONE B ^(h7) // MARINE POLLUTANT (CHLORINE) ^(h4) //
EMERGENCY CONTACT: 800-424-9300 ^(g) // HAZMAT STCC = 4920523 ^(h11)

Items ^(a) through ^(g) are required entries, and items ^(c) through ^(f) are referred to as the basic description. Item ^(h) refers to additional entries that may appear. Typically, items ^(b) through ^(f) are in the sequences shown; however, certain items (technical name and subsidiary hazard class/division) may appear in parentheses between items ^(b) through ^(f).

Figure 8. Examples of Shipping Description Entries

a. **Reporting Marks (initials) and Number**

The shipping paper for a trailer/container must include the reporting mark and number **only** when the reporting mark and number are displayed on the trailer/container.

b. **Total Quantity Notation**

- (1) For bulk packages or cylinders, some indication of the total quantity must be shown (certain abbreviations are acceptable). For example, "1 TNK" (1 tank container), "1 IBC" (1 intermediate bulk container), or "10 CYL" (10 cylinders).
- (2) For **non-bulk packages**, the total quantity is given by both:
 - (a) weight or volume (including the unit of measure); for example, "100 LBS", "55 GAL", "5 KG", or "208 L"; and
 - (b) number and type of packages; for example "12 DRUMS", "12 DRUMS (UN 1A1)", "15 BOXES (4G)", or "2 UN 3H1 JERRICANS".
- (3) For Class 1 materials, the quantity must be the net explosive mass.
- (4) An indication of total quantity is not required for packages containing only residue.

c. **Proper Shipping Name**

- (1) The proper shipping name of the hazardous material may be one or more words, such as "CHLORINE" or "SULFURIC ACID." The proper shipping name may include a number that indicates the concentration of the material and/or the words "MIXTURE" or "SOLUTION".
- (2) When a N.O.S. (Not Otherwise Specified) shipping name appears, the technical name of the product may appear in parentheses immediately after the N.O.S. shipping name, such as "CORROSIVE LIQUID, N.O.S. (CAPRYL CHLORIDE)." N.O.I. (Not Otherwise Indexed) or N.O.I.B.N. (Not Otherwise Indexed By Name) may be used instead of N.O.S.
- (3) For waste shipments, the word "WASTE" will precede or be part of the proper shipping name of the material.

d. **Hazard Class/Division – numeric or worded**

Reference: For further information on hazard classes/divisions, see the list of hazard classes and divisions in Table 1, page 8.

- (1) For certain hazardous materials, the subsidiary hazard class(es)/division(s) may appear in parenthesis after the primary hazard class/division. For example, Ethylene Oxide is listed as "2.3 (2.1)", and Chlorine is listed as "2.3 (5.1, 8)".
- (2) The hazard class need not be repeated for "COMBUSTIBLE LIQUID, N.O.S." shipments.
- (3) Divisions 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 may show a compatibility group letter after the division (for example, "1.1A"). The letter has no significance in rail transportation – it is for vessel and highway segregation requirements.

e. **Identification Number**

A 4-digit identification number must appear on the shipping papers with the prefix "UN" (United Nations) or "NA" (North America) as appropriate. **Note:** The identification number ^(e) may be found either before the proper shipping name ^(c) or after the hazard class/division ^(d) until January 1, 2013 when the identification number must appear before the proper shipping name ^(c).

f. Packing Group

The packing group must appear on the shipping papers in Roman numerals ("I", "II", or "III"). The packing group may be preceded by the letters "PG" ("PG I", "PG II", or "PG III").

Exceptions:

- (1) Classes/divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 4.1 (self-reactive liquids or solids, types B-F), 5.2, 6.2, 7, and ORM-D do not require the packing group notation.
- (2) In addition, the following identification numbers from classes/divisions 3, 4.2, 4.3, 5.1, 8 and 9 do not require the packing group notation:

| | | | | | |
|--------|--------|--------|--------|--------|--------|
| NA1365 | UN3072 | UN3166 | UN3316 | UN3343 | UN3476 |
| UN2426 | UN3121 | UN3171 | UN3334 | UN3363 | UN3477 |
| UN2990 | UN3127 | UN3269 | UN3335 | UN3473 | |

g. Emergency Response Telephone Number

Shipping papers for hazardous materials must show a 24-hour emergency response telephone number, including the area code, for use in the event of an emergency involving the hazardous materials. For telephone numbers outside the United States, the international access code or the "+" (plus) sign, country code, and city code, as appropriate, must be included.

Note: In some cases, a shipper name or contract number may be shown before or after the emergency response telephone number.

Exceptions: Emergency response telephone numbers are not required when the hazardous material is shown as "LIMITED QUANTITY", "LTD QTY", or its proper shipping name is:

- (1) battery powered - equipment or vehicle
- (2) carbon dioxide, solid or dry ice
- (3) castor - bean, meal, flake, or pomace
- (4) consumer commodity
- (5) engines, internal combustion
- (6) fish – meal or scrap, stabilized
- (7) fumigated container not containing other hazardous materials
- (8) refrigerating machine
- (9) vehicle, flammable gas powered
- (10) vehicle, flammable liquid powered
- (11) wheelchair, electric.

h. Additional Entries

Some hazardous material shipping descriptions may contain one or more of these entries:

- (1) "RESIDUE: LAST CONTAINED ..." (for packages emptied to the maximum extent possible)

-
- (2) "HOT" notation added before a proper shipping name for elevated temperature materials
 - (3) "RQ" for Reportable Quantity notation of a hazardous substance
 - (4) "MARINE POLLUTANT" notation
 - (5) "POISON (TOXIC)-INHALATION HAZARD (PIH or TIH)" or "INHALATION HAZARD (IH)" notation
 - (6) Hazard Zone notation ("ZONE A," "ZONE B," "ZONE C," or "ZONE D")
 - (7) "LIMITED QUANTITY" or "LTD QTY" notation
 - (8) FRA Movement Approval (for example, "FRA 0109123"), DOT Special Permit (for example, "DOT-SP 9271"), DOT Exemption (for example, "DOT-E 9271"), Special Approval Number (for example, "SA 920403"), or Competent Authority Number (for example, "CA 9701001")
 - (9) Hazardous Materials Response Code (STCC "48xxxxx" or "49xxxxx")
 - (10) certain shipments described using Canadian regulations may contain both an Emergency Response Plan number and its activation telephone number (e.g., "ERP-2-1008 (800-555-5555) // SPECIAL COMMODITY")
 - (11) box of asterisks with or without wording (not required by DOT, but may appear on railroad-produced documents)
 - (12) Shipper's Certification - a declaration on the shipping paper provided by the shipper to the first carrier for loaded hazardous material shipments. It indicates compliance with the DOT regulations. The certification must be signed by hand or mechanically. It reads either:

"This is to certify that the above-named (herein-named) materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."

or

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name, and are classified, packed, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations."
 - (13) "OIL" notation
 - (14) additional radioactive material entries
 - (15) name and address of the place of business in Canada of the consignor
 - (16) additional hazardous waste shipping description entries (see item 6a, page 19)
 - (17) EX number for air bag modules classified as Class 9. **Note:** Recycled air bag modules do not require the EX number entry, but must have the word recycled after the basic description.
 - (18) For International shipments, the notation "DANGEROUS GOODS IN EXCEPTED QUANTITIES" as appropriate

4. Rejecting Hazardous Material Shipments

When required shipping description entries are not available,

-
- a. Reject shipment and have drayman arrange to get the proper shipping papers to the railroad. (specific for individual carrier).
 - b. Prepare the appropriate paperwork to give to the drayman indicating the reason for rejection.

5. Handling Shipping Papers Received at the Gate

When accepting a hazardous material shipment with a hard copy shipping paper where the information is not in the billing system:

- a. Forward the shipping paper received as instructed for the location.
- b. Follow internal procedures for handling the shipment.

6. Handling Hazardous Waste Shipping Papers and Manifests

Note: Hazardous waste shipments are governed by U.S. Environmental Protection Agency regulations in addition to DOT regulations.

- a. In addition to the shipping description entries required for other hazardous materials shipments (see items 3a through 3g, pages 16-17), the shipping paper for a hazardous waste shipment, called a hazardous waste manifest, must also have the following entries:
 - (1) name, address, and telephone number of the hazardous waste generator
 - (2) name and address of the hazardous waste disposal facility
 - (3) name of carrier(s)
 - (4) waste manifest number
 - (5) special handling instructions.
- b. When accepting a hazardous waste shipment **with** required shipping description entries and hazardous waste manifest entries (item 6a above) displayed in the billing system, accept the trailer/container without receiving a copy of the hazardous waste manifest.
- c. When accepting a hazardous waste shipment **without** required shipping description entries and hazardous waste manifest entries (item 6a above) displayed in the billing system, check to see that the hazardous waste manifest provided by the drayman contains both the required shipping description entries and the hazardous waste manifest entries.

If all required entries are present on the hazardous waste manifest provided by the drayman, follow internal procedures to accept the trailer/container and a copy or copies of the hazardous waste manifest.

- d. If accepting a trailer/container of hazardous waste from a drayman:
 - (1) Sign and date the hazardous waste manifest if requested (per individual carrier procedures).
 - (2) Return a copy of the hazardous waste manifest to the drayman.
 - (3) Mail the remaining copies of the hazardous waste manifest to the _____ (per individual carrier procedures).
- e. If releasing a trailer/container of hazardous waste to a drayman, obtain and retain a signed and dated copy of the hazardous waste manifest (per individual carrier procedures).

7. Handling Requests for Required Documentation

Upon receiving a request for shipping papers or emergency response information from a railroad employee, regulatory enforcement officer or local emergency response personnel:

- a. In an emergency situation
 - (1) Share **all** the information on the shipping papers for the shipment **and**
 - (2) Share **all** available emergency response information.
- b. In a non-emergency situation
 - (1) Follow internal procedures for providing this information.

8. Providing Required Documentation When Releasing Hazardous Material Shipments

Before allowing a trailer/container of hazardous material, loaded or residue/empty, to be released,

- a. Print out the shipping papers.
- b. Make sure that required entries are on shipping papers.
- c. Provide drayman the appropriate shipping papers.
- d. If drayman requests emergency response information, print out the emergency response information for the shipment from the computer and provide the emergency response information to the drayman.

SECTION IV. LEAKAGE

1. General Requirements

Hazardous material shipments, whether loaded or containing a residue, must be inspected to determine they are not leaking.

2. Look for Leakage

- a. While making the required inspection, look for indications of leaking contents (odors, liquids, vapors, sounds of gas escaping, etc.) from the trailer/container.
- b. When a leak involving a hazardous material shipment is found:
 - (1) Do not accept the shipment for rail transportation.
 - (a) Contact your supervisor who may elect to move the shipment to a designated holding area at the facility for further action.
 - (b) The unit must not be put back in highway transportation.
 - (c) Make sure that the shipping description entries and emergency response information are available in hard copy or in the computer.
 - (2) Notify your supervisor or security personnel on site.
 - (3) Take the appropriate action to protect yourself and others in the area.
 - (a) Stay away from and upwind of any spilled material.
 - (b) Review the shipping papers and the emergency response information found in either the **Emergency Response Guidebook (ERG)** or on the shipping papers.
 - (c) Move to a safe location (see guidelines in the **Emergency Response Guidebook (ERG)**, on the shipping papers, or in the facility emergency response plan).
 - (4) Follow procedures found in the facility emergency response plan.
 - (5) When safe to do so, prepare the appropriate paperwork indicating the reason for rejection.

SECTION V. PLACARDS

1. General Requirements

Hazardous material shipments, whether loaded or containing a residue, must **not** be accepted for rail transportation or released for non-rail transportation unless they are properly placarded. Not all hazardous material shipments require placards.

When accepting or releasing a hazardous material shipment that is placarded, gate personnel must verify that any required placards are displayed properly and match the entries on the shipping paper.

Placard - a sign measuring 10.8 in (273 mm) by 10.8 in (273 mm) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text (see Figure 9, page 25 for pictures of placards).

- a. Text indicating the hazard is only required on Class 7 and DANGEROUS placards and on OXYGEN placards without the identification number.

Note: For shipments originating internationally, text may not appear on a Class 7 placard.

- b. Except for the DANGEROUS and OXYGEN placards, the hazard class/division text does not have to be in English as long as the size, color, hazard class/division, and symbol are correct.

Note: A placard meeting IMDG Code requirements [minimum of 9.8 in (250 mm) by 9.8 in (250 mm)] is acceptable.

2. Placard Requirements

Each trailer/container containing hazardous material must be placarded on each side and each end in accordance with the instructions below.

Note: Unless the shipping papers indicate that the shipment is a limited quantity, all international shipments of hazardous materials require placards.

- a. Placards are required when transporting **any quantity** (bulk or non-bulk packages) of these hazard classes/divisions:
 - 1.1 Explosive with mass explosion hazard
 - 1.2 Explosive with projection hazard
 - 1.3 Explosive with predominantly fire hazard
 - 2.3 Gas poisonous (toxic) by inhalation
 - 4.3 Dangerous when wet material
 - 5.2 Organic peroxide, Type B, liquid or solid, temperature controlled
 - 6.1 Material poisonous (toxic) by inhalation
 - 7 Radioactive Yellow III label or exclusive use shipments of low specific activity (LSA) material and surface contaminated objects.
- b. Placards are required when transporting quantities of **1001 lbs. (454 kg) or more** (bulk or non-bulk packages) of these hazard classes/divisions:

Note: Placards may be displayed for quantities less than 1001 lbs. of these materials, as long as they are appropriate for the shipment.

- 1.4 Explosive with no significant blast hazard

Note: Placards are not required for Class 1.4S materials.

- 1.5 Very insensitive explosive; blasting agents
- 1.6 Extremely insensitive detonating substances
- 2.1 Flammable gas
- 2.2 Nonflammable, nonpoisonous (nontoxic) compressed gas
- 3 Flammable liquid
- 4.1 Flammable solid
- 4.2 Spontaneously combustible material
- 5.1 Oxidizer
- 5.2 Organic peroxide, other than “organic peroxide, Type B, liquid or solid, temperature controlled” in 2(a) above
- 6.1 Poisonous (toxic) material, (other than material poisonous (toxic) by inhalation)
Note: For U.S. transportation of Class 6.1 PG III materials, a PG III placard may be used in place of a POISON (TOXIC) placard.
- 8 Corrosive material
- 9 Miscellaneous hazardous material.

Exception: For U.S. transportation only, Class 9 placards are not required. However, bulk shipments of Class 9 materials transported in the US must be marked with the identification number (see Section VI, item 2b, page 28).

Combustible Liquids (see item c(7), page 23 for handling combustible liquids in non-bulk packages)

Mixed hazardous materials in this item (see item d, page 24).

c. Placards are **not** required for:

- (1) Hazardous material shipments with less than 1001 lbs. (454 kg) total weight, provided the hazard classes/divisions are included in item b, page 22
- (2) ORM-D (Other Regulated Materials – D)
- (3) Class 6.2 (Infectious Substances)
- (4) Class 9 (US/Canadian transportation) materials that display the identification number on an orange panel or a white square-on-point display configuration.
- (5) Limited Quantity (LTD QTY) shipments when identified as such on shipping papers
- (6) Cryogenic atmospheric gases, other than Oxygen (for example, Argon)
- (7) Combustible liquids in non-bulk packages (i.e., drums), usually found in intermodal shipments, unless the material is a hazardous substance or hazardous waste
- (8) Empty bulk containers which have been cleaned of residue and purged of vapor to remove any hazard, and contain a cleaning certificate in the document tube
- (9) Except for exclusive use shipments of low specific activity (LSA) material and surface contaminated objects, shipments listed as Radioactive White I and Radioactive Yellow II on shipping papers
- (10) Class 1.4S

-
- (11) Shipments of molten sulfur moving to the United States from Canada, provided the identification number and the words MOLTEN SULFUR appear on each side of the trailer/container.
- d. For U.S. shipments, the DANGEROUS placard may be used instead of separate placards when a trailer/container is loaded with 1,001 lbs (454 kg) or more of non-bulk packages involving two or more hazard classes/divisions from item b, page 22
- Note:** Additional placards may be displayed with the DANGEROUS placard, as required when 2,205 lbs (1,000 kg) or more of one hazard class/division is present.
- e. Placards may be displayed for hazardous materials, even when not required, as long as the placard is appropriate for the contents of the shipment.
- f. Residue/empty bulk containers of hazardous material must remain placarded in the same manner as the loaded shipment, unless
- (1) The container has been cleaned of residue, and
 - (2) Purged of vapor to remove any hazard and a cleaning certificate is in the document tube.
- g. When the shipping paper displays the words "POISON (TOXIC) INHALATION HAZARD", each trailer/container must display the POISON (TOXIC) INHALATION HAZARD (6) or POISON (TOXIC) GAS (2) placard, as appropriate, on both sides and both ends in addition to other placards which may be required.
- Note:** If the POISON (TOXIC) INHALATION HAZARD (6) or POISON (TOXIC) GAS (2) placard is already displayed, it is not necessary to duplicate the placards.
- h. When the shipping paper displays a subsidiary division "(4.3)", each trailer/container must display the subsidiary DANGEROUS WHEN WET placard in addition to other placards required.
- i. Some shipments of hazardous materials require subsidiary placards that represent subsidiary hazards. They must not display a 4-digit identification number.



















































| | |
|--|--|
| <p>Class 1 (Explosives)</p> <div>     </div> <p>Division 1.1 (Explosive with Mass Explosion Hazard)</p> <p>Division 1.2 (Explosive with Projection Hazard)</p> <div>     </div> <p>Division 1.3 (Explosive with Pre-dominantly a Fire Hazard)</p> <p>Division 1.4 (Explosive with no Significant Blast Hazard)</p> <p>Division 1.5 (Very Insensitive Explosive)</p> <p>Division 1.6 (Extremely Insensitive Explosive)</p> | <p>Class 4 (Flammable Solids & Reactive Solids/Liquids)</p> <div>     </div> <p>Division 4.1 (Flammable Solid)</p> <p>Division 4.2 (Spontaneously Combustible)</p> <div>   </div> <p>Division 4.3 (Dangerous When Wet Material)</p> |
| <p>Class 2 (Gases)</p> <div>     </div> <p>Division 2.1 (Flammable Gas)</p> <p>Division 2.1 (Flammable Gas in cryogenic form in DOT 113 Tank Car)</p> <div>     </div> <p>Division 2.2 (Nonflammable Gas)</p> <p>Division 2.3 Zone A (Poison Gas)</p> <div>  </div> <p>Note: Authorized only for U.S. to Canada or Canada to U.S. shipments.</p> <p>Anhydrous Ammonia (Canadian)</p> <div>   </div> <p>Division 2.3 Other than Zone A (Poison Gas)</p> <div>   </div> <p>Oxygen</p> <div>  </div> <p>Note: The word "TOXIC" can be used in place of the word "POISON".</p> <p>May appear in conjunction with U.S. "POISON" GAS Placard (INHALATION HAZARD CLASS 2) on Canadian or International Shipments.</p> | <p>Class 5 (Oxidizers & Organic Peroxides)</p> <div>     </div> <p>Division 5.1 (Oxidizer)</p> <p>Division 5.2 (Organic Peroxide)</p> <p>Class 6 (Poisonous Materials)</p> <div>     </div> <p>Division 6.1 Zone A [Poison or Toxic Inhalation Hazard (PIH or TIH)]</p> <p>Division 6.1 Zone B [Poison or Toxic Inhalation Hazard (PIH or TIH)]</p> <div>    </div> <p>Division 6.1 PGI [Other than Poison or Toxic Inhalation Hazard (PIH or TIH)], PGII (POISON), or PGIII</p> <p>Division 6.1 PG III</p> <p>Note: The word "TOXIC" can be used in place of the word "POISON"</p> |
| <p>Class 3 (Flammable Liquids)</p> <div>   </div> <p>Class 3 (Flammable Liquid)</p> <p>Combustible Liquids</p> <div>   </div> <p>Combustible Liquid</p> | <p>Class 7</p> <div>  </div> <p>Class 7 (Radioactive Material)</p> <p>Class 8</p> <div>   </div> <p>Class 8 (Corrosive Material)</p> <p>Class 9 (Miscellaneous Hazardous Materials)</p> <div>   </div> <p>Class 9 (Miscellaneous Hazardous Material)</p> <p>Mixed Load</p> <div>   </div> <p>U.S. Canadian</p> |

Figure 9. Placards for Hazardous Materials by Hazard Class/Division

Note: Text indicating the hazard is only required on Class 7 and DANGEROUS placards and on OXYGEN placards without the identification number. For shipments originating internationally, text may not appear on a Class 7 placard.

Except for the DANGEROUS and OXYGEN placards, the hazard class/division text does not have to be in English as long as the size, color, hazard class/division, and symbol are correct.

3. Inspect for Placards

- a. Make sure that required placards on hazardous material shipments:
 - (1) Are consistent with the shipping paper information (verify that placards match shipping description entries on shipping papers)
 - (2) Are in place on both sides and both ends of hazardous material shipments
 - (a) Multiple placards may be found in all four locations on some shipments
 - (b) **Subsidiary Placard:** Some shipments of hazardous materials require subsidiary placards that represent subsidiary hazards. Subsidiary placards must not display a 4-digit identification number.
 - (3) Are readily visible from the direction they face, except for placards on the ends of trailers/containers in or on a rail car.

Make sure the bottoms of the placards are at least **five (5)** feet, or higher, above the bottom rail of a container (or, if a trailer, **five (5)** feet above the ground) and at least **five (5)** feet in from the corner post on the sides.

(photo of properly placarded trailer/container)

Note: When the placard is not at the appropriate height, ask the drayman to move the placard up to the appropriate height. If the drayman refuses to move the placard to the appropriate height, **reject** the shipment.
 - (4) Are in placard holders or securely attached to the trailer/container (tape can be used as long as it does not cover the symbol, wording, or numbers).
 - (5) Are not damaged, faded (should have color similar to that printed in this document), or obscured by dirt or trailer/container parts (ladders, pipes, doors, and tarpaulins).
 - (6) Do not cover any other markings on the trailer/container
 - (7) Have the words or numbers horizontal (if displayed), reading from left to right.
- b. When accepting a hazardous material shipment at the gate and placards are incorrect, illegible, or missing per individual railroad's current policy: **(individual railroad policy)**
 - (1) **Reject** the trailer/container until corrections have been made; and
 - (2) Prepare the appropriate paperwork for the drayman indicating the reason for rejection.

Note: When accepting shipments, railroad or contractor personnel are not required to remove improper placards.
- c. When releasing a hazardous material shipment at the gate, railroad or contractor personnel must insure that improper placards are removed, obliterated or securely covered and proper placards are applied.

4. Providing Placards When Releasing Hazardous Material Shipments

When releasing a hazardous material shipment at the gate and any placards are incorrect, illegible, or missing:

- a. Provide a replacement for each incorrect, illegible, or missing placard; and
- b. You may ask the drayman to apply the placards and if the drayman declines, railroad or contractor personnel will have to apply the proper placards.

When placards do not match shipping description entries, contact the shipper to verify that you are applying the proper placards for the shipment.

Improper placards must be removed, obliterated, or securely covered.

SECTION VI. MARKINGS

1. General Requirements

Hazardous material shipments, whether loaded or containing a residue, must not be accepted for rail transportation or released for non-rail transportation unless they are properly marked. Not all hazardous material shipments require markings.

When accepting or releasing a hazardous material shipment that is marked, gate personnel must verify that any required markings are displayed properly and match the entries on the shipping paper.

Markings include a descriptive commodity name, identification number, instructions, cautions (such as marine pollutant, inhalation hazard, elevated temperature material, limited quantities, fumigant, non-odorized), weight, specification, or UN marks, or combinations thereof, required for display on trailers/containers transporting hazardous materials.

2. Marking Requirements

a. Commodity Name

- (1) For a tank container of hazardous material, the proper shipping name of the material must be legibly marked in English (in at least 2-inch high letters) on two opposing sides of the tank.
- (2) When accepting a tank container of hazardous material and the commodity name is incorrect, illegible, or missing, reject the shipment until corrections have been made.
- (3) When releasing a hazardous material shipment in a tank container and the commodity name is incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing commodity name; and
 - (b) You may ask the drayman to apply the commodity name and if the drayman declines, railroad or contractor personnel will have to apply the commodity name.

b. Identification Number

- (1) Identification number markings must appear on both sides and both ends, either on the placard or in close proximity to the placard, when a placard is required for:
 - (a) Bulk packages of hazardous materials (including Class 9 when no placard is required)
 - (b) Trailers/containers having 8,820 lbs. (4000 kg.) or more of non-bulk packages of hazardous materials, with the same proper shipping name and identification number, and not having any other hazardous or non-hazardous materials.

- (2) Identification numbers can be displayed in one of three ways, as Figure 10, page 29 shows:

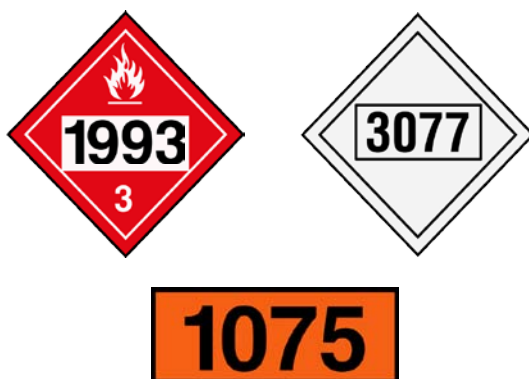


Figure 10. Identification Numbers

- (3) Identification numbers must not be displayed on:
- (a) EXPLOSIVES 1.1, 1.2, 1.3, 1.4, 1.5, or 1.6 placards
 - (b) RADIOACTIVE placards
 - (c) DANGEROUS placards
 - (d) Subsidiary placards.
- (4) Make sure that the identification numbers displayed match the identification number on the shipping papers.
- (5) When accepting a hazardous material shipment and the identification numbers are incorrect, illegible, or missing, reject the shipment until corrections have been made.
- (6) When releasing a hazardous material shipment and the identification numbers are incorrect, illegible, or missing:
- (a) Provide a replacement for each incorrect, illegible, or missing identification number; and
- Note:** Missing identification numbers must be replaced and may be entered on the appropriate placard, orange panel, or white square-on-point configuration by hand using a **black indelible** marker (numbers as large as possible).
- (b) You may ask the drayman to apply the identification number and if the drayman declines, railroad or contractor personnel will have to apply the proper identification number.

c. MARINE POLLUTANT Mark

- (1) For a material described on the shipping papers as a “MARINE POLLUTANT”, make sure that the MARINE POLLUTANT mark (see Figure 11, page 30) appears on both sides and both ends of the trailer/container.

Note: For U.S. shipments (not subject to IMDG Code) of marine pollutants, MARINE POLLUTANT marks are not required when the trailer/container displays a placard.



Figure 11. MARINE POLLUTANT Mark

- (2) When accepting a hazardous material shipment that is a marine pollutant and a required MARINE POLLUTANT mark is incorrect, illegible, or missing, reject the shipment until corrections have been made.
- (3) When releasing a hazardous material shipment that is a marine pollutant and a required MARINE POLLUTANT mark is incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing MARINE POLLUTANT mark; and
 - (b) You may ask the drayman to apply the MARINE POLLUTANT mark and if the drayman declines, railroad or contractor personnel will have to apply the MARINE POLLUTANT mark.

d. INHALATION HAZARD Mark

- (1) For a material described on the shipping papers as "POISON (TOXIC) – INHALATION HAZARD" or "INHALATION HAZARD," the words INHALATION HAZARD must appear (in at least 3.9-inch high letters) on both sides of the trailer/container, near the placards.

Note: When the words INHALATION HAZARD appear on the placards, the INHALATION HAZARD mark is not required on the trailer/container.
- (2) When accepting a hazardous material shipment that is an inhalation hazard and the words INHALATION HAZARD are incorrect, illegible, or missing, reject the shipment until corrections have been made.
- (3) When releasing a hazardous material shipment that is an inhalation hazard and the words INHALATION HAZARD are incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing INHALATION HAZARD mark; and
 - (b) You may ask the drayman to apply the INHALATION HAZARD mark and if the drayman declines, railroad or contractor personnel will have to apply the INHALATION HAZARD mark.

e. Elevated Temperature Material Mark

- (1) For a material described on the shipping papers with the words "HOT," "ELEVATED TEMPERATURE," or "MOLTEN" and transported in a bulk package, the elevated temperature material mark must be displayed on two opposing sides of the bulk package, in one of the following valid formats:
 - (a) the word HOT stenciled on the package itself
 - (b) the words MOLTEN SULFUR (or MOLTEN SULPHUR) or MOLTEN ALUMINUM (or MOLTEN ALUMINIUM), as appropriate, stenciled on the package itself
 - (c) the international elevated temperature material symbol (see Figure 12, page 31)

-
- (d) the word HOT displayed on a plain white-square-on-point configuration having the same outside dimensions as a placard (see Figure 12, page 31).

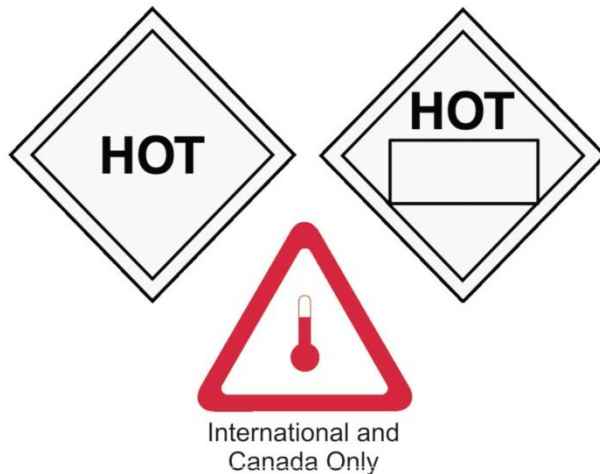


Figure 12. Elevated Temperature Material Mark

Note: Residue/empty shipments that last contained an elevated temperature material, such as asphalt, are not considered hazardous materials and do not require hazardous material shipping description entries on the shipping paper. When the shipping paper indicates residue/empty, the shipment may be accepted and moved in rail transportation without the hazardous material shipping description entries, even though the elevated temperature material mark and identification number are displayed.

- (2) When accepting a hazardous material shipment and a required elevated temperature material mark is incorrect, illegible, or missing, reject the hazardous material shipment until corrections have been made.
- (3) When releasing a hazardous material shipment and a required elevated temperature material mark is incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing elevated temperature material mark; and
 - (b) You may ask the drayman to apply the elevated temperature material mark and if the drayman declines, railroad or contractor personnel will have to apply the elevated temperature material mark.

-
- f. **LIMITED QUANTITIES Mark** (applies when vessel transportation is involved with the shipment)
- (1) A square-on-point with black border, top, and bottom displayed on at least one side or end of trailers/containers.



Figure 13. LIMITED QUANTITIES Mark

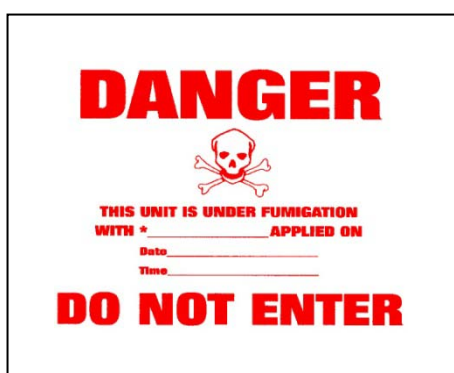
Note: The words LIMITED QUANTITIES or LTD QTY displayed on both sides and both ends of trailers/containers may be used until January 1, 2012.

- (2) The LIMITED QUANTITIES mark is required:
- (a) For an entire load of hazardous materials in limited quantities.
 - (b) For a mix of non-hazardous materials and hazardous materials in limited quantities.
- (3) The LIMITED QUANTITIES mark is **not** required when there are limited quantities and other hazardous materials not in limited quantities that require placards.
- (4) Packages containing hazardous materials in limited quantities need not be marked with the proper shipping name of the contents, but shall be marked with the UN number of the contents (preceded by the letters "UN") placed within a diamond. The width of line forming the diamond shall be at least 2 mm; the number shall be at least 6 mm high. Where more than one substance is included in the package and the substances are assigned to different UN numbers, then the diamond shall be large enough to include each relevant UN number.
- (5) When accepting a hazardous material shipment and a required LIMITED QUANTITIES mark is incorrect, illegible, or missing, reject the hazardous material shipment until corrections have been made.

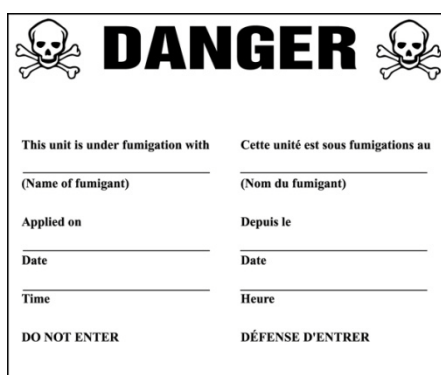
- (6) When releasing a hazardous material shipment and a required LIMITED QUANTITIES mark is incorrect, illegible, or missing:
- (a) Provide a replacement for each incorrect, illegible, or missing LIMITED QUANTITIES mark; and
 - (b) You may ask the drayman to apply the LIMITED QUANTITIES mark and if the drayman declines, railroad or contractor personnel will have to apply the LIMITED QUANTITIES mark.

g. FUMIGANT Mark

- (1) The purpose of the FUMIGANT mark (see Figure 14, page 33) is to warn persons unloading the trailer/container that it has been fumigated and that they must take appropriate precautions before unloading the trailer/container. The (*) on the mark will be replaced by the name of the fumigant.



United States of America



Canada



International

Figure 14. FUMIGANT Mark

- (2) The FUMIGANT mark must be in English. However, EPA regulations allow another language in addition to the English version on the same FUMIGANT mark or an additional one.

The FUMIGANT mark is required on each point of entry to a trailer/container.

(3) Shipping Description Entries

- (a) For U.S. shipments that are fumigated, information on the shipping papers is not required.
 - (b) For International (TDGR and IMDG Code) shipments that are fumigated, verify that the information for the shipment on the shipping papers includes the following entries - UN 3359, Fumigated Unit, name of the fumigant, amount of fumigant, date of fumigation, and any disposal information.
- (4) When accepting a hazardous material shipment and a required FUMIGANT mark is incorrect, illegible, or missing, reject the hazardous material shipment until corrections have been made.
- (5) When releasing a hazardous material shipment and a required FUMIGANT mark is incorrect, illegible, or missing:
- (a) Provide a replacement for each incorrect, illegible, or missing FUMIGANT mark; and
 - (b) You may ask the drayman to apply the FUMIGANT mark and if the drayman declines, railroad or contractor personnel will have to apply the FUMIGANT mark.

h. NON-ODORIZED Mark

- (1) A tank container transporting non-odorized liquefied petroleum gas (LPG) must be legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides, either near the commodity name or the placard(s).
- (2) The NON-ODORIZED or NOT ODORIZED marks may appear on a tank container used for both non-odorized and odorized LPG.
- (3) Shippers may include on shipping papers information that a shipment is not odorized.
- (4) When accepting a hazardous material shipment and a required NON-ODORIZED mark is incorrect, illegible, or missing, reject the hazardous material shipment until corrections have been made.
- (5) When releasing a hazardous material shipment and a required NON-ODORIZED mark is incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing NON-ODORIZED mark; and
 - (b) You may ask the drayman to apply the NON-ODORIZED mark and if the drayman declines, railroad or contractor personnel will have to apply the NON-ODORIZED mark.

i. Owner/lessee Name

- (1) The owner/lessee name must be displayed in one location on any tank container transporting hazardous materials.
- (2) When accepting a hazardous material shipment and a required owner/lessee name is incorrect, illegible, or missing, reject the hazardous material shipment until corrections have been made.
- (3) When releasing a hazardous material shipment and a required owner/lessee name is incorrect, illegible, or missing:
 - (a) Provide a replacement for each incorrect, illegible, or missing owner/lessee name; and

-
- (b) You may ask the drayman to apply the owner/lessee name and if the drayman declines, railroad or contractor personnel will have to apply the owner/lessee name.

3. Inspect for Markings

- a. Make sure that required markings on hazardous material shipments:

- (1) Are consistent with the shipping paper information (verify that markings match shipping description entries on shipping papers)
- (2) Are readily visible from the direction they face, except for markings on the ends of trailers/containers in or on a rail car.

Make sure the bottoms of the markings are at least **five (5)** feet, or higher, above the bottom rail of a container (or, if a trailer, **five (5)** feet above the ground) and at least **five (5)** feet in from the corner post on the sides.

(photo of properly marked trailer/container)

Note: When the marking is not at the appropriate height, ask the drayman to move the marking up to the appropriate height. If the drayman refuses to move the marking to the appropriate height, **reject** the shipment.

- (3) Are securely attached to the trailer/container (tape can be used as long as it does not cover the symbol, wording, or numbers).
 - (4) Are not damaged, faded (should have color similar to that printed in this document), or obscured by dirt or trailer/container parts (ladders, pipes, doors, and tarpaulins).
 - (5) Do not cover any other markings on the trailer/container
 - (6) Have the words or numbers horizontal (if displayed), reading from left to right.
- b. When accepting a hazardous material shipment at the gate and markings are incorrect, illegible, or missing per individual railroad's current policy: **(individual railroad policy)**
- (1) **Reject** the trailer/container until corrections have been made; and
 - (2) Prepare the appropriate paperwork for the drayman indicating the reason for rejection.

Note: When accepting shipments, railroad or contractor personnel are not required to remove improper markings.

- c. When releasing a hazardous material shipment at the gate, railroad or contractor personnel must insure that improper markings are removed, obliterated or securely covered and proper markings are applied.

4. Providing Markings When Releasing Hazardous Material Shipments

When releasing a hazardous material shipment at the gate and any markings are incorrect, illegible, or missing:

- a. Provide a replacement for each incorrect, illegible, or missing marking; and
- b. You may ask the drayman to apply the markings and if the drayman declines, railroad or contractor personnel will have to apply the proper markings.

When markings do not match shipping description entries, contact the shipper to verify that you are applying the proper markings for the shipment.

Improper markings must be removed, obliterated, or securely covered.

SECTION VII. EMERGENCY RESPONSE

1. General Requirements

When a leak involving a hazardous material shipment is found:

- a. Do not accept the shipment for rail transportation or allow the shipment to continue in rail transportation.
 - (1) Contact your supervisor who may elect to move the shipment to a designated holding area at the facility for further action.
 - (2) The unit must not be put back in highway transportation.
 - (3) Make sure that the shipping description entries and emergency response information are available in hard copy or in the computer.
- b. Notify your supervisor or security personnel on site.
- c. Take the appropriate action to protect yourself and others in the area.
 - (1) Stay away from and upwind of any spilled material
 - (2) Review the shipping papers and the emergency response information found in either the ***Emergency Response Guidebook (ERG)*** or on the shipping papers.
 - (3) Move to a safe location (see guidelines in the ***Emergency Response Guidebook (ERG)***, on the shipping papers, or in the facility emergency response plan).
- d. Follow procedures found in the facility emergency response plan.

GLOSSARY

Note: This glossary defines/explains the terms as used in this document.

Accepting hazardous material shipments – inbound transfer of possession of a trailer/container from a motor or vessel carrier to a rail carrier after verifying compliance with applicable governmental regulations and internal company rules.

Basic description – the identification number, proper shipping name, hazard class/division number, and packing group (if assigned) prescribed for a hazardous material.

Bulk package – package with capacity greater than 119 gallons (450 liters) for liquids, 882 pounds (400 kilograms) for solids, or a water capacity of greater than 1000 pounds (454 kilograms) for gases.

Carrier – a person (individual, corporation, company, etc.) who transports property in commerce by rail car, aircraft, motor vehicle, or vessel.

Commodity name – the proper shipping name or an authorized common name of a hazardous material.

Consumer commodity – a hazardous material that is packaged and distributed in a form intended or suitable for sale through retail sales agencies for consumption by individuals for personal care or household use. Consumer commodities are assigned to hazard class “ORM-D”, and are, typically, excepted from labeling, placarding and shipping paper requirements.

Container – any freight container (box) or tank container (intermodal (IM) portable tank, portable tank, UN portable tank, or portable bin). **Note:** A freight container is a reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted with its contents intact and intended primarily for containment of packages (in unit form) during transportation.

Dangerous goods – term used for “hazardous materials” in countries other than the United States.

Division – a subdivision of a hazard class; typically two numerals separated by a decimal point (2.1, 2.2, 2.3, 5.1, 5.2, etc.). For Class 1 (explosive materials), a “compatibility group letter” will be shown after the second numeral (1.1A, 1.4G, etc.).

Documentation – includes complete shipping papers with the appropriate shipping description entries and acceptable emergency response information.

Drayman – the driver of a motor vehicle delivering or receiving a trailer/container.

Elevated temperature material – a material which, when offered for transportation or when transported as a bulk package, is:

- a liquid at a temperature at or above 212°F (100°C);
- a liquid with a flash point at or above 100°F (38°C) that is intentionally heated and offered for transportation or transported at or above its flash point; or,
- a solid at a temperature at or above 464°F (240°C).

Contact with an elevated temperature material may result in thermal burns, in addition to other hazards associated with the material.

Emergency – an unforeseen combination of circumstances or the resulting state that calls for immediate action (for example, derailment and leaks).

Emergency response information – hazard and response information for each hazardous material, contained in the **Emergency Response Guidebook (ERG)** and other supplementary train documentation, to assist response personnel at hazardous material incidents.

Emergency response telephone number – the telephone number of an entity who is either knowledgeable of a hazardous material being shipped and has comprehensive emergency response and incident mitigation information for that material, or has immediate access to an entity who possesses such knowledge and information.

Freight container – see definition of “container”.

Fumigant – a poisonous/toxic agent in vapor form intended to destroy insects and vermin.

Hazard class – the category of hazard assigned to a material. A hazard class may be subdivided into divisions. When talking about hazard classes/divisions, the hazard class/division can be expressed as a number or with words (for example: Class 3 (three) or Flammable Liquid; Division 2.1 (two-point-one) or Flammable Gas). A material will have a primary hazard class/division and may have one or more subsidiary hazard classes/divisions which represent additional hazards associated with the material.

Hazardous material – a substance or material which the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term “hazardous material” includes hazardous substances, hazardous wastes, elevated temperature materials, and marine pollutants.

Hazardous material shipment – a hazardous material being transported by rail car, aircraft, motor vehicle, or vessel.

Hazardous substance – a hazardous material that, as determined by the U.S. Environmental Protection Agency, has a detrimental effect on the environment. To be regulated in transportation, the quantity in one package must equal or exceed the material’s “Reportable Quantity” (“RQ”).

Hazardous waste – a material subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency due to its potential threat to public health or the environment.

Hazardous waste manifest – a document specifically for tracking hazardous wastes in transportation. It contains the shipping description and identifies the waste generator, each transporter, and the designated (disposal) facility.

Hazard zone – one of four levels of inhalation hazard (Hazard Zones A through D) assigned to gases, and one of two levels of hazard (Hazard Zones A and B) assigned to liquids that are poisonous/toxic by inhalation. For example, when the hazard zone is “A,” it is shown on the shipping paper as “Zone A.” Zone A is the most hazardous, and Zone D is the least hazardous.

Identification number – a four-digit number preceded by “UN” (United Nations) or “NA” (North America) assigned to a hazardous material.

Inhalation hazard – term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

International shipment – a shipment being made between two or more countries or between places in one country through another country.

Limited quantity (LTD QTY) – a term used to indicate a hazardous material shipment which is allowed an exception to certain regulatory requirements because of the small amount of the material in a package.

Marine pollutant – a hazardous material that has a detrimental effect on marine/aquatic life.

Marking – a descriptive commodity name, identification number, instructions, cautions (such as marine pollutant, inhalation hazard, elevated temperature material, limited quantities, fumigant, non-odorized), weight, specification, or UN marks, or combinations thereof, required for display on trailers/containers transporting hazardous materials.

Non-bulk package – packaging with a capacity equal to or less than 119 gallons (450 liters) for liquids, 882 pounds (400 kilograms) for solids, or a water capacity of equal to or less than 1000 pounds (454 kilograms) for gases.

ORM-D (Other Regulated Material - D) – a material such as a consumer commodity that, due to its form, quantity, and packaging, presents such a limited hazard that it may not be subject to the hazardous material regulations when transported by rail.

Package – the packaging plus its contents. Packaging is the receptacle and any other components or materials necessary for the receptacle to perform its containment function.

Packing group – a grouping of hazardous materials according to the degree of danger:

- Packing Group I (shown as "PG I" or "I" on the shipping papers) indicates great danger.
- Packing Group II (shown as "PG II" or "II" on the shipping papers) indicates medium danger.
- Packing Group III (shown as "PG III" or "III" on the shipping papers) indicates minor danger.

Placard – a sign measuring at least 10.8 in (273 mm) by 10.8 in (273 mm) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text. Some placards must be displayed on a square background which is white with a black border.

Poison Inhalation Hazard (PIH) – term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Primary hazard – see definition of "hazard class".

Proper shipping name – the name of a hazardous material as specified by the regulations.

Releasing hazardous material shipments – outbound transfer of possession of a trailer/container to a motor or vessel carrier from a rail carrier after verifying compliance with applicable governmental regulations and internal company rules.

Reportable quantity (RQ) – the minimum quantity (in pounds or kilograms) in one package, required for a hazardous material to meet the definition of a "hazardous substance".

Residue – the hazardous material remaining in a package after its contents have been unloaded to the maximum extent possible. It may be indicated on the shipping papers by the phrases "RESIDUE: LAST CONTAINED . . .", "EMPTY . . .", or "MTY . . ." in association with the basic description.

Shipper's certification – a signed (or electronically printed) declaration on the shipping paper provided by the shipper to the first carrier for a loaded hazardous material shipment. It indicates compliance with the DOT regulations. The certification must be signed by hand or mechanically. It may read either:

"This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."

or

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name, and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations."

Shipping description entries – the specific information required on a shipping paper, including the "basic description", number and type of packages, total quantity; and additional entries that may be applicable to the shipment (such as "RQ", "Limited Quantity"/"LTD QTY", "Marine Pollutant", "Poison/Toxic Inhalation Hazard Zone A (or B, C or D)", etc.).

Shipping paper – any document providing the required entries for a hazardous material shipment.

Subsidiary hazard – see definition of "hazard class".

Subsidiary placard – a placard that identifies a specific material's subsidiary hazard(s).

Tank container – see definition of “container”.

Technical name – a recognized chemical name or microbiological name used in scientific and technical handbooks, journals, and texts to further identify a hazardous material.

Total quantity notation – the total weight or volume, including the unit of measurement, of the hazardous material contained in a package, such as “100 LBS”, “55 GAL”, “5 KG”, or “208 L”. For bulk packages and cylinders, merely an indication of the total quantity is required, such as “1 IM Tank” or “2 IBCs”; or, “10 cylinders” or “10 cyl.” For non-bulk packages, number and type of packages are also required, such as “12 DRUMS (UN 1A1)” or “15 BOXES”. An indication of total quantity is not required for packages containing only residue.

Toxic Inhalation Hazard (TIH) – term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Trailer – a cargo carrying body with permanent wheels on the rear end (also called a van or semitrailer).