# United States Hazardous Materials Instructions for Rail


**CSX HM-1 Effective December 1, 2015**

**Public Safety Coordination Center**
**1-800-232-0144**

# SECTION 1

## 6000 INTRODUCTION

### 6001 Purpose

One of the rail industry's primary focuses continues to be the safe transportation of hazardous materials. Rail employees interact regularly with employees of other railroads. If subscribing railroads implement and consistently apply a standard set of rules and regulations, we will significantly enhance both our employees' safety and the safety of the communities through which we operate. Those railroads involved in developing the ***United States Hazardous Materials Instructions for Rail*** therefore worked together to create these instructions for employees who transport hazardous materials.

***Note:*** These general guidelines may be appropriately modified by an individual railroad to be consistent with its unique operating rules and practices.

### 6002 Policy

To handle hazardous material shipments or incidents safely and efficiently, without delay, and in accord with local, state, and federal regulations, it is imperative that you familiarize yourself with the ***United States Hazardous Materials Instructions for Rail***, in addition to other operating rules. These instructions provide guidance on how to perform your duties so that both you and the company will comply with Department of Transportation (DOT) regulations.

Transportation employees who inspect or transport hazardous material by rail must have a copy of and comply with the ***United States Hazardous Materials Instructions for Rail***.

Employees who transport hazardous materials must also have a copy of the current ***Emergency Response Guidebook*** (ERG) readily accessible while on duty.

The company will provide appropriate training and testing to each employee who directly affects hazardous material transportation safety.

Always keep in mind that the company requires you to comply fully with the law. Compliance with the letter and spirit of our obligations is good corporate citizenship and is basic to achieving quality in all areas of our operations. Each of us has a duty to see that the railroad's actions are consistent with the highest legal and ethical standards.

### 6003 Questions

For questions about the ***United States Hazardous Materials Instructions for Rail***, contact your immediate supervisor.

### 6004 Print Date/Version

Effective July 01, 2015

### 6005 Regulatory Updates, Additions and Corrections

Requests should be submitted to the Association of American Railroads Hazardous Materials Committee for review. If approved, changes will occur in the next publication of the ***United States Hazardous Materials Instructions for Rail.***

## 6050 GENERAL INFORMATION

### 6051 Definition of 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. 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 hazard class, even if it meets the definition of more than one hazard class. Table 1 lists the hazard classes and divisions.

c. The term "hazardous material" includes hazardous substances, hazardous wastes, elevated temperature materials (HOT or MOLTEN), and marine pollutants.

**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***

**Combustible Liquids** (*regulated in bulk packaging; also regulated in non-bulk packaging 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)*

**6052 General DOT Requirement**

a. 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 and International regulations.

b. No person may transport a hazardous material in commerce unless the hazardous material is handled and transported according to DOT regulations.

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

# SECTION 2

## 6100 REQUIRED DOCUMENTATION

### 6101 General Requirements

No person may accept a hazardous material for shipment by rail transportation or transport a hazardous material in a train unless a member of the crew has each of the following documents:

a. Acceptable shipping papers,

b. Acceptable emergency response information,

c. A paper document showing the current position of the hazardous material shipment in the train.

***Note:*** The purpose of this documentation is to provide railroad personnel and emergency response personnel with accurate information about the hazardous materials.

Therefore, keep all current hazardous material documents neat and orderly and ensure that they are available in case of an emergency or for inspection. Properly discard superseded documents to eliminate the possibility of confusing or inconsistent information.

### 6102 Acceptable Shipping Papers

Any one of the following documents is an acceptable shipping paper for hazardous material shipments, as long as it includes the required shipping description entries (see Rule 6106 of this section), is legible, and is printed (manually or mechanically in English).

a. **Railroad-produced documents** – for example, train consists, train lists, wheel reports, waybills, industry work orders, or other similar documents.

b. **Customer-produced documents** – for example, bills of lading, or switch lists.

c. A **connecting carrier's documents.**

d. A **hand-printed document** (printed, not cursive letters) – for example, radio waybills.

e. A **hazardous waste manifest.**

### 6103 Acceptable Emergency Response Information

The ***Emergency Response Guidebook*** (ERG) contains acceptable emergency response information. The ERG may be supplemented by emergency response information printed as part of the train list/consist or provided by the customer – for example, a Safety Data Sheet (SDS).

### 6104 Document Indicating Position in Train

Before moving hazardous material shipments in a train, a member of the crew must have a paper document that shows the current position in the train of each hazardous material shipment (loaded and residue/empty).

When making pickups or setouts, update the document before proceeding. The train crew must update the document by handwriting on it or by appending or attaching another document to it.

### 6105 Checking for Shipping Papers

Make sure that a member of the crew has a paper copy of acceptable shipping papers, with the required entries, for each hazardous material when:

a. Accepting hazardous material shipments at a customer's facility, interchange point, or other location,

b. Moving hazardous material shipments in a train,

c. Delivering hazardous material shipments to a customer's facility, interchange point, or other setout point,

d. Switching hazardous material shipments outside a yard.

***Note:*** Shipping papers are not required in the switch crew's possession when moving hazardous material shipments within a yard or at a customer's facility.

**Exception:** Although they may remain placarded and marked, residue/empty packages of "Elevated Temperature Material" and Class 9 hazardous substances that are not hazardous wastes or marine pollutants do not require hazardous material shipping papers and emergency response information.

### 6106 Reviewing Shipping Paper Entries

Review the shipping description entries for each hazardous material on the shipping papers and make sure that the following entries (a-g under this item) are present. (Figure 1 shows two formats for displaying the shipping description entries.)

***Vertical Format***

GATX 12345
(a) 1T/C (b)
UN1830 (c)
SULFURIC ACID (d)
8 (e)

PG II (f)
RQ (SULFURIC ACID) (h3)
EMERGENCY CONTACT: 800-424-9300 (g)
HAZMAT STCC = 4930040 (h11)

***Horizontal Format***

UTLX 12345 (a)
1T/C (b) // UN1017 (c) // CHLORINE (d) // 2.3 (5.1, 8) (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)

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) may appear in parentheses between items (b) through (f).

**Figure 1. Shipping Description Entries**

**a. Reporting marks (initials) and number**

The shipping paper for a rail car, freight container, transport vehicle, or portable tank must include the reporting mark and number **only** when the reporting mark and number are displayed on the rail car, freight container, transport vehicle, or portable tank.

**b. Total Quantity Notation**

(1) For empty packaging, bulk packaging, or cylinders of Class 2 materials, some indication of the total quantity must be shown (certain abbreviations are acceptable). For example, "1 T/C" (1 tank car), "1 C/L" (1 car load), or "10 CYL" (10 cylinders).

(2) For **non-bulk packaging**, 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 UN 1A1", "15 4G", or "2 UN 3H1JERRICAN".

(3) For Class 1 materials, the quantity must be the net explosive mass.

**c. Identification Number**

A 4-digit number preceded by "UN", "NA," or "ID" assigned to a hazardous material.

**d. 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.

(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)."

(3) Residue/empty shipments in tank cars must include the phrase "RESIDUE: LAST CONTAINED…" in association with the basic description, including the proper shipping name.

(4) For waste shipments, the word "WASTE" will precede or be part of the proper shipping name of the material.

**e. Hazard Class/Division – Numeric or Worded**

**Reference:** For further information on hazard classes/divisions, see the definition in the Glossary and the list of hazard classes/divisions in Rule 6051 Table 1.

(1) For certain hazardous materials, the subsidiary hazard class(es), will appear in parenthesis after the primary hazard class. 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) Classes 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 may show a compatibility group letter after the hazard class (for example, **"**1.1A**"**). The letter has no significance in rail transportation.

**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:***

Hazard Classes 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.

In addition, the following identification numbers from Classes 3, 4.2, 4.3, 5.1, 8, and 9 do not require the packing group notation:

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

**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 unit

(8) Krill meal, PG III

(9) Refrigerating machine

(10) Vehicle, flammable gas powered or 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" or "TOXIC" notation

(6) "POISON (TOXIC)-INHALATION HAZARD (PIH or TIH)" or "INHALATION HAZARD (IH)" notation

(7) Hazard Zone notation ("ZONE A," "ZONE B," "ZONE C," or "ZONE D")

(8) "LIMITED QUANTITY" or "LTD QTY" notation

(9) FRA Movement Approval (for example, **"**FRA 0109123**"**), DOT Special Permit (for example, **"**DOT- SP 9271**"**), Special Approval Number (for example, **"**SA 920403**"**), or Competent Authority Number (for example, **"**CA 9701001**"**)

(10) DOT-113 notation ("DOT-113, DO NOT HUMP OR CUT OFF IN MOTION")

(11) Hazardous Materials Response Code (Hazmat STCC "48xxxxx" or "49xxxxx")

(12) Certain shipments described using Canadian regulations may contain both an Emergency Response Assistance Plan number and its activation telephone number (e.g., "ERP-2-1008 (800-555- 5555) // SPECIAL COMMODITY")

(13) Box of asterisks with or without wording (not required by DOT, but may appear on railroad-produced documents)

(14) Shipper's Certification

(15) "OIL" notation

(16) Additional radioactive material entries

(17) Name and address of the place of business in Canada of the consignor

(18) Additional hazardous waste shipping description entries (see Section 2, Rule 6111,a)

(19) 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.

(20) For International shipments, the notation "DANGEROUS GOODS IN EXCEPTED QUANTITIES" as appropriate

(21) "NON-ODORIZED" or "NOT-ODORIZED" notation for non-odorized liquefied petroleum gas

**6107 Handling Situations when Shipping Papers or Required Entries Are Not Available**

When the appropriate shipping paper is not present or when all required entries on the shipping paper provided are not present:

a. Do not move the car until the appropriate shipping paper or the required entries on the shipping paper are present.

b. Take one of these three actions:

(1) Correct the existing document. Contact the customer or your supervisor, request the entries required to complete the shipping description, and legibly print those entries in the appropriate sequence (see Section 2, Rule 6106),

**or**

(2) Obtain the appropriate shipping paper from the shipper, your supervisor, or other appropriate person,

**or**

(3) Use a radio waybill:

(a) Contact your supervisor or dispatcher and request the appropriate entries for a radio waybill (see Figure 2, Example of Radio Waybill).The supervisor or dispatcher will provide the requested entries via radio or telephone to you.

(b) Complete the radio waybill using the information the supervisor or dispatcher provided.

***Note:*** If a radio waybill form is not available, legibly print the required hazardous material information on a sheet of paper, including the car's initials and number (see Section 2, Rule 6106).

(c) Keep the radio waybill with the other shipping documents until either reaching the final destination or receiving another shipping paper with the appropriate entries.

(d) For each radio waybill issued, add the car initial and number and its position on the position-in-train document.

**6108 Checking for Emergency Response Information**

a. When accepting and transporting hazardous material shipments, make sure a copy of the emergency response information for each shipment (see Section 2, Rule 6103) is available.

b. If emergency response information is **not** available, do **not** accept or transport the car.

**6109 Checking for Position-in-Train Document**

a. When transporting hazardous material shipments in a train, make sure a member of the crew has a paper document indicating the current position in train of each hazardous material shipment.

b. If the paper document indicating the current position in train of each hazardous material is **not** available:

(1) Update the paper documents already in your possession,
**or**

(2) Create a hand-printed list showing the position in train of each hazardous material shipment.

***Note:*** The list must show the reporting marks and number for each hazardous material shipment in the train and its actual position in the train.

# SECTION 3

## 6150 INSPECTION

### 6151 General Requirements

a. To determine that they are secure and in acceptable condition for transportation, all loaded and residue/empty hazardous material shipments must be inspected at these points:

(1) Before accepting them from the shipper,

(2) When receiving them in interchange,

***Note***: Run-through trains received in interchange may continue to the next inspection point before being inspected.

(3) When placing them in a train,

(4) At other points where an inspection is required (e.g., 1000 mile inspection).

b. Accept or transport only those hazardous material shipments that conform to these instructions.

### 6152 Inspection Procedures

In addition to inspecting rail cars for compliance with train make up, adequate buffer cars, shiftable loads and temperature control equipment (see Figure 13, Position In Train Chart, Rule 6350) as well as mechanical requirements, visually inspect each loaded or residue/empty hazardous material shipment (including flat cars transporting placarded or marked trailers or containers) and adjacent rail cars, **from ground level** (do not climb on or go under the car) and check for:

- Leakage,
- Required placards and markings, including stenciling, car certificates, and qualification dates (See Rule 6200 for details),
- Secure fastening of closures,
- Signs of tampering, such as suspicious items or items that do not belong, the presence of an "Improvised Explosive Device" (IED), and other signs that the security of the car may have been compromised.

***Note:*** Where an indication of tampering or a foreign object is found, take the following actions:

(1) Do not accept or move the rail car.

(2) Immediately move yourself and others to a safe location away from the rail car before using radios and cell phones to make notifications.

(3) For cars at a customer's facility, immediately contact local plant personnel. If local plant personnel are not available or cannot explain what you see, immediately contact the train dispatcher (follow your specific railroad instructions).

(4) For cars on interchange tracks or in the yard, immediately contact the yardmaster or train dispatcher (follow your specific railroad instructions).

**a. Inspecting All Car Types (from ground level)**

(1) Without climbing on the car, make sure that the hazardous material shipment is not leaking.

(a) Look for leaking contents – drips, wetness, or material on the car or on the ground.

(b) Look for a vapor cloud.

***(c)*** Listen for hissing sounds of the contents escaping.

***Note:*** If you find a hazardous material shipment leaking, follow the instructions in Rule 6153 of this section and in Rule 6505 (Emergency Response), item 5.

(2) Make sure placards and markings are appropriate for the shipment and displayed correctly (see Rule 6200, Placards and Markings).

(3) Before accepting a hazardous material shipment from the shipper, make sure that:

(a) All customer loading and unloading lines are disconnected,

(b) Derails, chocks, and blue flags are removed,

(c) All platforms are raised or in the clear.

**b. Inspecting Placarded/Marked Tank Cars (from ground level)**

Check placarded tank cars or tank cars marked with an identification number to see that:

(1) Protective housing covers are closed,

(2) Manway cover swing bolts are up and in place,

(3) All valves and fittings appear to be closed and secure,

(4) Visible plugs or caps (including bottom outlet caps) or other fittings are securely in place,

***Note:*** When heater coil caps are provided, they must be applied.

(5) "Double shelf couplers" and roller bearings are present.

**c. Inspecting Placarded/Marked Gondola Cars (from ground level)**

(1) Look for loosely fastened gondola covers.

(2) Make sure the cover or tie downs do not foul any safety appliances.

**d. Inspecting Placarded/Marked Hopper Cars (from ground level)**

Check that discharge gates are closed and secured.

**e. Inspecting Shipments Placarded EXPLOSIVES 1.1 or 1.2 (from ground level)**

(1) In addition to the other inspection requirements in this section, for shipments placarded EXPLOSIVES 1.1 and 1.2:

(d) Look for indications of damage to the contents.

(e) Make sure that completed "car certificates" (see Figure 3, Car Certificates) are displayed on both sides of the rail car:

(i) Car certificates must be removed after the rail car, trailer, or container is unloaded.

(ii) Car certificates are either 18 cm (7.1 in) by 18 cm (7.1 in) or 15 cm (5.9 in) by 20 cm (7.9 in) in size.

(2) Do not accept or transport the car until all damage has been corrected and car certificates are in place.

_____Railroad

No 1_____Station_____20 _____
_____hereby certify that I have this day personally examined Car Number_____and that the car is in condition for service and complies with the FRA Freight Car Safety Standards (49 CFR Part 215) and with the requirements for freight cars used to transport explosives prescribed by the DOT Hazardous Materials Regulations (49 CFR Part 174).

_____
Qualified Person Designated Under 49 CFR 215.11

No 2_____Station_____20_____
I have this day personally examined the above car and hereby certify that the explosives in or on this car, or in or on vehicles or in containers have been loaded and braced; that placards have been applied, according to the regulations prescribed by the Department of Transportation; and that the doors of cars so equipped fit or have been stripped so that sparks cannot enter.

_____
Shipper or his authorized agent

_____
Qualified Person Designated Under 49 CFR 215.11

No 3_____Station_____20_____

_____
I hereby certify that I have this day personally supervised the loading of the vehicles or containers on and their securement to the above car.

_____
Shipper or railway employee inspecting loading and securement

***Note 1**: A shipper must decline to use a car not in proper condition.*
***Note 2**: All certificates, where applicable, must be signed.*

**Figure 3. Car Certificates**

**f. Inspecting Placarded/Marked Intermodal Shipments (from ground level)**

In addition to completing other inspection requirements in this section:

(1) Make sure that an intermodal tank container of hazardous material is not transported with a container above or below the tank.

(2) Make sure that placards are fully visible when containers are loaded in a well car.

(3) Make sure that intermodal tank containers are placed so that the bottom outlet valves are pointed toward the ends of the well or platform.

**6153 Handling Defects**

When a hazardous material shipment does not appear to be prepared for transportation:

a. Do not accept or pull the hazardous material shipment or allow it to continue in transportation.

b. Notify the customer, train dispatcher, yardmaster, or your immediate supervisor, as appropriate, and explain the problem.

# 6200 PLACARDS AND MARKINGS

## 6201 General Requirement

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

## 6202 Placard Requirements

Each bulk packaging, freight container, transport vehicle, or rail car 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, most international shipments (including Canada and Mexico) of hazardous materials require placards.

***Placard*** - a sign measuring at least 250 mm (9.8 in) by 250 mm (9.8 in) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text (see Figure 4 for pictures of placards). Text indicating the hazard is not required on placards other than the Class 7 and DANGEROUS placards; however, for shipments originating internationally, text may not appear on a Class 7 placard. The hazard class text does not have to be in English, except for the DANGEROUS placard, as long as the size, color, hazard class, and symbol are correct.

a. Placards are required when transporting **any quantity** (bulk or non-bulk) of these hazard classes:

   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) materials and surface contaminated objects

b. Placards are required when transporting total weight of **1001 lbs (454 kg) or more** (bulk or non-bulk) of these hazard classes:

   ***Note:*** Placards may be displayed for a total weight 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 2a 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 Rule 6204).

Combustible Liquids [see item c (7) below for handling combustible liquids in non-bulk packages]

Mixed hazardous materials in this item (see item f below)

c. Placards are not required for:

(1) Hazardous material shipments with less than 1001 lbs (454 kg) total weight, provided the hazard classes are included in item b above

(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

(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 packaging (i.e., drums), usually found in intermodal shipments, unless the material is a hazardous substance or hazardous waste

(8) Rail cars and intermodal tank containers of hazardous materials which have been cleaned and purged

(9) Shipments listed as Radioactive White I and Radioactive Yellow II on shipping papers

(10) Class 1.4S

(11) Shipments of molten sulfur moving to or from Canada provided the letters and numerals "UN2448", or the numerals "2448" and the words "MOLTEN SULFUR" (or "MOLTEN SULPHUR") appear on each side of the tank car

d. Placards may be displayed for hazardous materials, even when not required, as long as the placard is appropriate for the contents of the shipment. If displayed, then all instructions for that placard apply.

e. Certain hazard classes require the display of the primary placard on a white square background, including (see Figure 4, Placard Chart): *(When required to be affixed to the rail car.)*

(1) Class 1.1 or 1.2 explosives

(2) Class 2.3 or 6.1 poison/toxic inhalation hazard zone A material

(3) Class 2.1 flammable gases loaded in DOT-113 tank cars, including tank cars containing only a residue of the material.

f. The DANGEROUS placard may be used instead of separate placards for each hazard class when a rail car, trailer, or container is loaded with non-bulk packages of two or more hazard classes from Rule 6202, b.

***Note**:* When 2,205 lbs (1,000 kg) or more of one hazard class is loaded at one loading facility, the placards for that hazard class as specified in Rule 6202, b of this section must also be applied.

g. Some shipments of hazardous materials require subsidiary placards that represent secondary hazards. Subsidiary placards must not display a 4-digit identification number, but will display the hazard class or division number.

***Note:*** Subsidiary placards must be displayed when the subsidiary hazard class is 2.3, 4.3, or 6.1 with the notation ”POISON-INHALATION HAZARD” or ”TOXIC-INHALATION HAZARD” present on the shipping papers.

h. For residue/empty hazardous materials shipments, the rail car, trailer, or container must remain placarded in the same manner as the loaded shipment, unless the packaging:

(1) Has been cleaned of residue, or

(2) Has been purged of vapor to remove any hazard, or

(3) Has been refilled, with a material requiring different placards or no placards, to such an extent that any residue remaining in the packaging is no longer hazardous,

(4) Contains a residue of an elevated temperature material. These shipments may remain placarded in the same manner as when it contained a greater quantity of the material even though the material no longer meets the definition for an elevated temperature material.

(5) Contains a residue of a hazardous substance, Class 9 that does not meet the definition of another hazard class and is not a hazardous waste or marine pollutant. These shipments may remain marked, labeled, and/or placarded in the same manner as when it contained a greater quantity of the material even though the material no longer meets the definition for a hazardous substance.

**6203 Inspecting for Placards**

a. Make sure that all required placards are:

(1) Consistent with the shipping paper information,

(2) On both sides and both ends of the shipment,

(3) In placard holders or securely attached to the rail car, trailer, or container,

(4) Not damaged, faded - color should be similar to the color printed in this document (see Figure 4, Placard Chart), or obscured by dirt or car part,

(5) Oriented horizontally, so you can read them from left to right,

(6) Readily visible from the direction they face, except for placards on the ends of trailers and containers in or on a rail car.

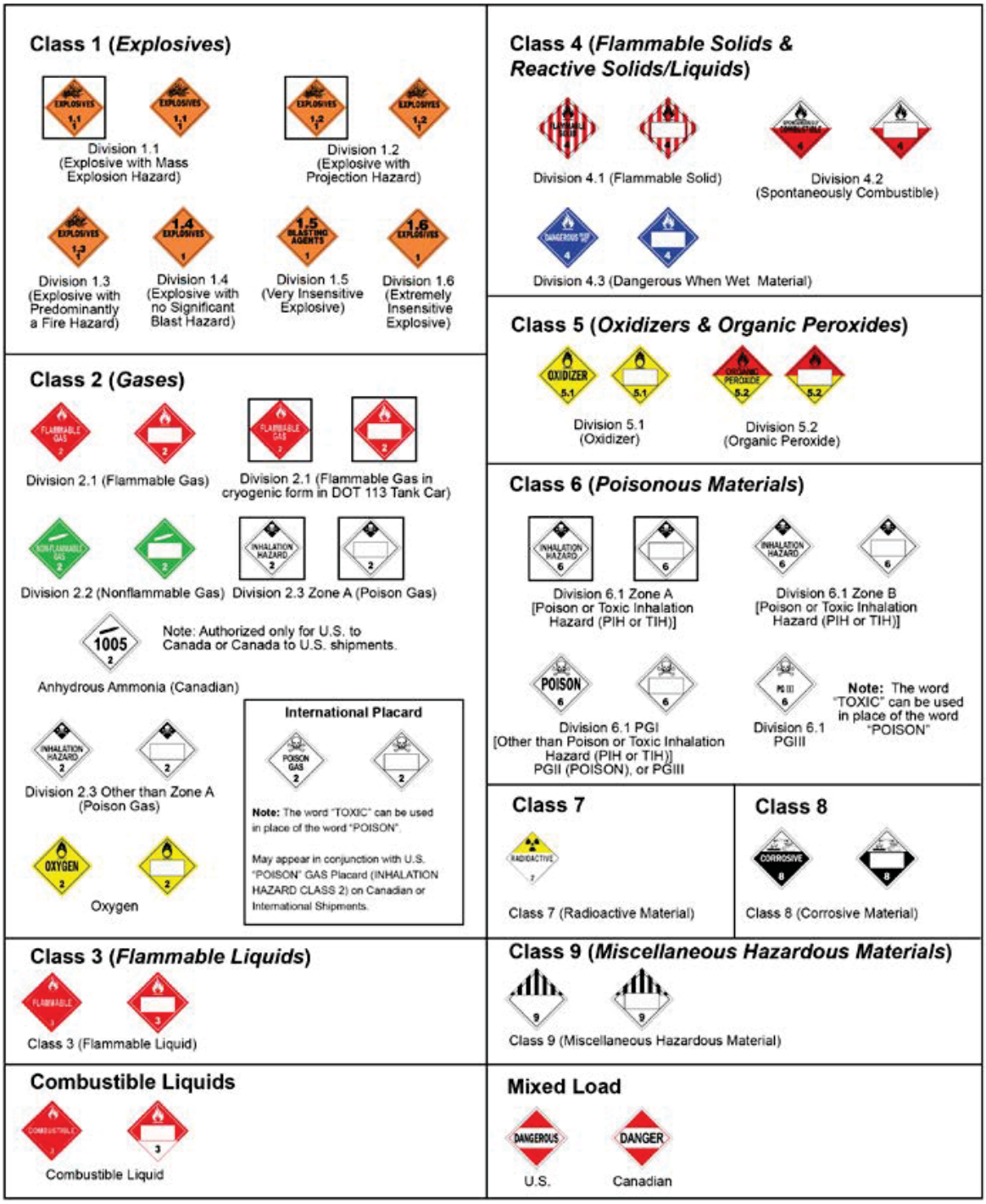


**Figure 4. Placards for Hazardous Materials by Hazard Class**

Text indicating the hazard is not required on placards other than the Class 7 and DANGEROUS placards; however, for shipments originating internationally, text may not appear on a Class 7 placard. The hazard class text does not have to be in English, except for the DANGEROUS placard, as long as the size, color, hazard class, and symbol are correct.

(2) When **accepting** an intermodal tank container or tank car of hazardous materials from the shipper or in interchange and the commodity name is illegible or missing:

(a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.

(b) Do **not** accept the shipment until corrections have been made.

(3) When the commodity name on a tank car is discovered illegible or missing **en route**, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

***Note:*** See Appendix A for list of materials that require the commodity name on tank cars

**6211 Tank Car Specification and Qualification Dates Stencils**

(1) Make sure the stencils describing the tank car specification (e.g. DOT 111A100W1) and qualification dates are legible (see Figure 9). These stencils will appear on both sides of the tank car toward the end on the right as you face the car.

(2) Make sure the tank car qualification dates for pressure relief devices (PRD), tank, and interior heater coils are current (a car is currently within the qualification date until the last day of the year shown) (see Figure 9).

***Note 1:*** When the car is loaded before the end of the year, it may be transported for unloading purposes but must be requalified before reloading.

***Note 2:*** A tank car containing the residue of a hazardous material that is overdue its periodic qualification date may move and not be in violation of DOT regulations. The regulations only address loading a tank car overdue for its periodic qualification.

**DOT 111A100W1**

| | | STATION STENCIL | QUALIFIED | DUE |
|---|---|---|---|---|
| TANK QUALIFICATION | | ABC-1 | 2014 | 2024 |
| THICKNESS TEST | | ABC-1 | 2014 | 2024 |
| SERVICE EQUIPMENT | | ABC-1 | 2014 | 2024 |
| PRD: | 75 PSI | DEF-1 | 2014 | 2024 |
| INT HTR | | FGL-1 | 2014 | 2024 |
| LINING | | ABC-1 | 2014 | 2019 |
| 88.B.2 INSPECTION | | ABC-1 | 2014 | 2024 |
| STUB SILL | | ABC-1 | 2014 | 2024 |

**Figure 9. Tank Car Specification and Qualification Dates Stencils**

(3) When the qualification date is overdue, do not accept loaded tank cars from the shipper.

(4) When found en route, car may proceed to destination after contacting your supervisor.

**6212 FUMIGANT Mark**

(1) As information, the purpose of the FUMIGANT mark (see Figure 10) is to warn persons unloading the rail car, trailer, or container that it has been fumigated and that they must take appropriate precautions before unloading the car. The (*) on the mark will be replaced by the name of the fumigant.

(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.

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

(3) Shipping Description Entries

(a) For U.S. shipments that are fumigated, information on the shipping papers is not required.

(b) For International (Canadian and IMDG) shipments verify that the information for the shipment on the shipping papers includes the following entries - UN3359, Fumigated Unit, class 9, name of the fumigant, amount of fumigant, date of fumigation, and any disposal information.


**Figure 10. FUMIGANT Mark**

## 6400 KEY TRAINS

### 6401 General Requirement

Trains carrying specified numbers of loaded rail cars, trailers, or containers of hazardous materials must be operated as "Key Trains.

### 6402 Key Train Definition

A "Key Train" is any train as described in either a, b, or c below:

a. one (1) or more loads of spent nuclear fuel (SNF) or high level radioactive waste (HLRW) moving under the following Hazardous Materials Response Codes - 4929142, 4929143, 4929144, or 4929147

**or**

b. one (1) or more loaded tank cars containing materials that require the phrase "POISON/TOXIC- INHALATION HAZARD" on the shipping papers (Hazard Zone A, B, C, or D), anhydrous ammonia (UN1005), or ammonia solutions (UN3318)

**or**

c. twenty (20) or more loaded hazardous materials shipments or intermodal portable tank loads having any combination of hazardous materials.

***Exception***: Do not count box cars, trailers, or containers carrying mixed loads of hazardous materials when determining key train status.

### 6403 Identifying Key Trains

a. A computer-generated train consist/train list will identify Key Train status in the header block on the first page.

b. When a computer-generated train consist/train list is not available or hazardous material cars are added to a train, the conductor must review the shipping papers for all hazardous material cars and determine Key Train status.

c. After picking up or setting out hazardous material shipments **en route**, the Key Train status may change. The conductor must determine whether or not Key Train status has changed and, if so, promptly notify the train dispatcher.

### 6404 Instructions for Operating Key Trains

a. The maximum authorized speed for Key Trains is 50 MPH, unless further restricted.

***Note:*** Where lower speed restrictions are in effect, or when the train is restricted to a lower speed for other reasons, the lower speed governs.

b. A key train will hold the main track, when practicable, unless a speed of greater than 10 MPH is authorized for the siding or auxiliary track.

c. Only cars equipped with roller bearings will be allowed in a Key Train.

d. When a defect in a Key Train is reported by a wayside/trackside warning detector but a visual inspection fails to confirm evidence of a defect, the train must not exceed 30 MPH until it has passed over the next wayside detector or is delivered to a terminal for a mechanical inspection. If the same car sets off the next detector or is found to be defective, it must be set out from the train.

e. Unless relieved of the requirement to do so by the operating railroad's train dispatcher, the crew operating a Key Train on a foreign railroad must, at the earliest opportunity, notify the foreign railroad's train dispatcher that the train is a Key Train as defined by the operating railroad.

**6405 When operating on a controlled track, all key trains must be equipped with armed and working two-way telemetry or distributive power coupled to the rear of the train. If two-way telemetry or distributive power fails en route, key trains:**

1. ***Must not exceed 30 MPH, and***
2. ***Must not operate over a section of track with a grade of 1% or more for two continuous miles. These areas are identified in special instructions as steep grade.***

**6406 CSX train documents will identify specific key trains that must not exceed 40 MPH within the limits of a high threat urban area (HTUA). Special instructions identify the location and limits of HTUAs. The restriction applies to trains carrying at least 20 tank car loads of Class 3 Flammable Liquids identified on the tonnage graph with restriction code 6008.**

**6407 A train that picks up loaded Class 3 Flammable Liquid cars en route must not exceed 40 MPH within the limits of an HTUA when the train has 20 or more total loads of Class 3 Flammable Liquids following the pickup.**

## 6500 EMERGENCY RESPONSE

### 6501 General Requirement

When an emergency occurs, SAFETY IS OF FIRST IMPORTANCE.

a. Make an emergency call as radio rules require.

b. Look for a fire or vapor cloud.

c. Determine the status of crewmembers in the area.

d. Warn and keep everyone at a safe distance.

**6502 When a Fire or Vapor Cloud is Visible**

a. Take the shipping papers (including the emergency response information) and the Emergency Response Guidebook and move yourself and other crewmembers uphill and upwind the evacuation distance recommended in the Emergency Response Guidebook. Stay out of ditches and low areas.

b. Do not smoke or use fuses.

c. Provide the train dispatcher or yardmaster with as much of the following information as is available:

(1) Specific location of the emergency (station, mile post location, nearest street or crossing),

(2) Type of emergency,

(3) Status of crewmembers,

(4) Cars involved, including each car's initials and numbers and their extent of involvement (for example, leaking, derailed, or on fire),

(5) Surroundings (e.g., proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions),

(6) Resources necessary to handle the situation (for example, fire, ambulance, and law enforcement agencies),

(7) Location where a crewmember with shipping papers will meet arriving emergency response personnel.

d. Once you are in a safe location:

(1) Identify yourself and cooperate with the local emergency response personnel as described in Rule 6504,

(2) Review your shipping papers and emergency response information,

(3) If necessary, move to the farthest distance recommended in:

(a) Information from the ***Emergency Response Guidebook,***

**or**

(b) Other supplementary emergency response information printed as part of the train list/consist or provided by the customer – for example, a Safety Data Sheet (SDS).

**6503 When No Fire or Vapor Cloud is Visible**

a. Review the shipping papers for hazardous material shipments.

b. Take the shipping papers (including the emergency response information) and the Emergency Response Guidebook and inspect the train to identify the rail cars, trailers, or containers involved, and look for indications of the release of hazardous materials.

c. When you encounter a hazardous material release, unusual smells, or noises during this inspection:

(1) Avoid contact with the material and its vapors.

(2) Move yourself and other crewmembers uphill and upwind the evacuation distance recommended in the Emergency Response Guidebook. Stay out of ditches and low areas.

(3) Eliminate any ignition sources (no smoking, no fusees).

(4) Warn all bystanders to stay away.

d. After completing the inspection, notify the train dispatcher or yardmaster with as much of this

information as is available:

(1) Status of crewmembers

(2) Cars involved, including each car's initials and numbers and their extent of involvement (for example, leaking, derailed, or on fire)

(3) Surroundings (e.g., proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions)

(4) Resources necessary to handle the situation (for example, fire, ambulance, and law enforcement agencies)

(5) Location where a crewmember with shipping papers will meet arriving emergency response personnel.

e. Once you are in a safe location:

(1) Identify yourself and cooperate with the local emergency response personnel as described in Rule 6504.

(2) Review your shipping papers and emergency response information.

(3) If necessary, move to the farthest distance recommended in:

(a) information from the ***Emergency Response Guidebook***

**or**

(b) other supplementary emergency response information printed as part of the train list/consist.

**6504 Cooperating with Local Emergency Responders**

a. Immediately share any requested information from the shipping papers with emergency response personnel.

(1) Provide an extra copy of the train list/consist, when available.

***Note***: Retain any waybills and a copy of the train list/consist, until you can deliver them to the first railroad manager on the scene.

(2) Immediately provide a copy of the emergency response information provided with the shipment.

b. Help emergency response personnel identify cars and the commodities involved. Use shipping papers or observations from a safe location to accomplish this task.

c. Give the first railroad manager on the scene an oral description of the incident and indicate any assistance you provided emergency responders.

d. Remain at the scene, at a safe distance, until a railroad manager relieves you.

e. A railroad spokesperson will handle discussing the incident with the media or other non-emergency response personnel.

**6505 Handling Leaking Hazardous Material Shipments**

Take these actions when there is any sign of leakage:

a. Do **not** allow the hazardous material shipment to continue in transportation until the leak is controlled.

***Note:*** Leaking hazardous material shipments may be moved, with proper railroad authority, only as far as necessary to reduce or eliminate the immediate threat of harm to human health, the environment, or railroad operations. Movement of leaking hazardous material shipments may require government approval.

b. When it is necessary to move a leaking hazardous material shipment, use an adequate number

# APPENDICES

## Appendix A – List of Materials that Require the Commodity Name on Tank Cars

Division 2.1 materials

Division 2.3 materials

Acrolein, stabilized

Ammonia, anhydrous, liquefied

Ammonia solutions (more than 50% ammonia)

Bromine or Bromine solutions

Bromine chloride

Chloroprene, stabilized

Dispersant gas or Refrigerant gas

Formic acid

Hydrocyanic acid, aqueous solutions

Hydrofluoric acid, solution

Hydrogen cyanide, stabilized (less than 3% water)

Hydrogen fluoride, anhydrous

Hydrogen peroxide, aqueous solutions (greater than 20% hydrogen peroxide)

Hydrogen peroxide, stabilized

Hydrogen peroxide and peroxyacetic acid mixtures

Nitric acid (other than red fuming)

Phosphorus, amorphous

Phosphorus, white dry or Phosphorus, white, under water or

Phosphorus White, in solution, or Phosphorus, yellow dry or

Phosphorus, yellow, Under water or Phosphorus, yellow, in solution

Phosphorus white, molten

Potassium nitrate and sodium nitrate mixtures

Potassium permanganate

Sulfur trioxide, stabilized

Sulfur trioxide, uninhibited

## Appendix B – Glossary

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

**Buffer car** – a non-placarded rail car, a rail car with a placard or marking shown in Group F on the Switching Chart or Group E on the Position-in-Train Chart, a residue/empty tank with no other restrictions, or a placarded rail car with no other restrictions.

**Bulk packaging** - packaging with capacity greater than (450 liters) for liquids, 882 pounds (400 kilograms) for solids, or a water capacity of greater than 1000 pounds (454 kilograms) for gases. For example, bulk bags, intermodal (IM) portable tanks, portable tanks, portable bins, gondola cars, hopper cars, or tank cars.

**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 intermodal tank container (intermodal (IM) portable tank, portable tank, UN portable tank, or portable bin).

**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.

**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.

**Engine -** means a locomotive propelled by any form of energy and used by a railroad.

**Freight container –** 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.

**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 in rail cars, trailers, or containers in rail transportation. All hazardous material shipments require shipping papers. When moved in rail cars, trailers, or containers, hazardous material shipments may or may not be placarded or marked with an identification number.

**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 4-digit number preceded by “UN”, “NA” or “ID” assigned to a hazardous material.

**Improvised Explosive Device (IED)** – is a device fabricated in an improvised manner incorporating explosives or destructive, lethal, noxious, pyrotechnic, or incendiary chemicals in its design. This device generally includes a power supply, a switch or timer, and a detonator or initiator.

**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.

**Interchange** - the process of transferring rail cars to or from another railroad.

**Intermodal tank container** – an intermodal (IM) portable tank, portable tank, UN portable tank, or portable bin

**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, sour crude oil), weight, tank car specification and qualification dates stencils, or UN marks, or combinations thereof, required for display on hazardous material shipments.

**Movement Approval** – a onetime authorization to move a non-conforming package not meeting the applicable hazardous material regulations. This provides no relief of any regulations other than specifically stated in the approval.

**N.O.S.** - initials, found on shipping papers, which mean "Not Otherwise Specified."

**Non-bulk packaging** - 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.. For example, bags, bottles, boxes, cylinders, or drums.

**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 250 mm (9.8 in) by 250 mm (9.8 in) 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

**Placarded car -** a rail car displaying placards in accordance with DOT regulations.

**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.

**Position-in-Train document** – a paper document showing the current position of all hazardous material shipments within the train. This document could be the train list/consist or a separate document specifically for this purpose.

**Primary hazard –** see definition of “hazard class”.

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

**Radio waybill** – a form used to record shipping description entries provided orally.

**Rail car** – equipment used in rail transportation. For example, box car, flat car, gondola car, hopper car, tank car, or caboose, but not an engine**.**

**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 packaging, including a tank car, 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.

**Special Car Handling Instructions (SCHI) Code *(specific to BNSF operations)*** – Two-letter code used to identify the primary placard required for a hazardous material shipment.

**Special Permit –** Special permit means a document issued by the Associate Administrator under the authority of 49 U.S.C. 5117 permitting a person to perform a function that is not otherwise permitted under Subchapter A or C of Title 49 Subtitle B Chapter I of the U.S. Code of Federal Regulations, or other regulations issued under 49 U.S.C. 5101 et seq. (e.g., Federal Motor Carrier Safety routing requirements). The terms “special permit” and “exemption” have the same meaning for purposes of Subchapter A or C of Title 49 Subtitle B Chapter I of the U.S. Code of Federal Regulations or other regulations issued under 49

U.S.C. 5101 through 5127. An exemption issued prior to October 1, 2005 remains valid until it is past its expiration date, terminated by the Associate Administrator, or issued as a special permit, whichever occurs first.

**Shipper's Certification** - a signed (or electronically printed) declaration on the shipping paper provided by the shipper to the first transporter 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.”

***Note***: A shipper’s certification is required on any shipping paper that the customer provides to the crew for loaded hazardous material cars.

**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).

**Switching** - the operation of moving rail cars within a yard, at a customer’s facility, or at an interchange point, in order to place them in a train or on a classification, repair, or storage track. It does **not** include moving rail cars to or from a shipper's facility or industry track into or out of the yard.

**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).

**Train** - one or more engines coupled, with or without rail cars, displaying a marker, and requiring an appropriate air brake test.

**Yard** - a system of tracks, other than main tracks and sidings, used for making and breaking up trains and for other purposes, such as repair or storage of cars.