

JOB AID

**HAZMAT Transportation Part 2:**  
**Shipping Papers, Certifications**  
**and Manifests**

## HAZMAT Transportation Part 2: Shipping Papers, Certifications and Manifests

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According to the Hazardous Materials Regulations (HMR), shipping papers must accompany most hazardous material (HAZMAT) shipments. Shipping papers prove vital to transportation carriers, who must transport hazardous materials safely, and to emergency responders when responding to HAZMAT incidents. Any additional information required by 49 CFR 172.203 must come after the basic description unless otherwise directed. See Appendix A for sample basic descriptions

### Information Required on Shipping Papers

Shipping papers must contain:

- Select information about the hazardous material
  - Identification
    - listed before non-hazardous materials
    - highlighted or in contrasting color from non-hazardous materials
    - have an **X** in the "HM" column or use the letters **RQ**
  - Transportation requirements or restrictions
- Emergency response telephone number
- Signed shipper certification

Keep in mind that:

- All entries must be legible and in English
- The only accepted codes and abbreviations are those authorized by the HMR
- You must number pages consecutively and specify the total number of pages on the first page
- Shippers must keep copies of shipping papers for two years and hazardous waste manifests for three years after the hazardous material is accepted by the initial carrier
- Carriers must keep a copy of the shipping paper for one year after initial acceptance

### Completing the Shipping and Basic Descriptions

#### **Shipping Description**

The shipping description includes the:

- Basic description
- Total quantity of material (by mass or volume)
- Number and type of packages
- Additional information required by the HMR in 49 CFR 172.203

#### **Basic Description**

The basic description provides transportation carriers and emergency responders with key information. There is only one acceptable way of entering this information on shipping papers:

- **"I.S.H.P."**
  - Identification number
  - Proper shipping name
  - Hazard class or division
  - Packing group

Example: UN 1760, Corrosive liquids, n.o.s. (contains Caprylyl chloride), 8, PG II

### **Additional Description Requirements**

Any additional information required by 49 CFR 172.203 must come after the basic description unless otherwise directed.

- General additional description requirements, limited and reportable quantities, radioactive material, and empty containers
  - DOT exemptions and special permits: Add “DOT-E” or “DOT-SP” and the applicable number after the basic description
  - Limited quantities: Include “Limited Quantity” or “Ltd Qty” after the basic description
  - Hazardous substances
    - If not reflected in the proper shipping name, enter the name of the hazardous substance (as listed in Appendix A) in parentheses after the basic description
    - Place the letters “RQ” before or after the basic description
    - If the material contains two or more hazardous substances, identify at least two of the substances with the lowest RQ
  - Radioactive materials: Refer to 49 CFR 172.203(d) to include the additional description entries that apply
  - Empty packaging or tank cars containing any residue: Include “RESIDUE: Last Contained” before the basic description

### **Additional Descriptions: Mode of Transportation**

- Highway
  - Shippers must determine whether anhydrous ammonia and liquefied petroleum gas (LPG) are suitable for transport in a cargo tank made of quenched and tempered (Q and T) steel (specification MC 330 or MC 331 high-pressure cargo tank)
  - For noncorrosive grades of LPG, enter "Noncorrosive" or "Noncor" after the basic description. For LPG grades other than noncorrosive, enter "Not for Q and T Tanks" after the basic description.
- Air
  - Certain hazardous materials are limited/prohibited from all air transportation
  - Certain hazardous materials are limited/prohibited from passenger-carrying aircraft: “Cargo Aircraft Only” must follow the basic description
- Rail
  - On the shipping paper after the basic description, the rail carrier must enter the corresponding reporting mark and number as displayed on any:
    - Rail car
    - Freight container
    - Transport vehicle
    - Portable tank
  - Additional notations include:
    - Identifying the type of tank car
    - Entering “Do Not Hump or Cut Off Car While in Motion” when transporting a Division 2.1 flammable gas in a DOT-113 tank car
    - Maximum operating speed (15 mph for elevated-temperature materials)

- Water
  - Shipper's name
  - Minimum flash point (if it's 141.8 °F/61°C or less)

### Additional Descriptions: Dangers, Special Precautions and Emergency Response

- Technical names
  - For generic/n.o.s. proper shipping names, use the letter **G** in Column 1 of HMT
    - Place in parentheses after the proper shipping name
    - Can include the word "Contains"
- Marine pollutants
  - Proper shipping name must reflect the material that qualifies it as a marine pollutant
  - Applies if transporting marine pollutants:
    - By water
    - In bulk packaging by highway, air or rail
  - Add the marine pollutant name in parentheses after the proper shipping name
- Poisonous or toxic materials
  - Add the word "Poison" or "Toxic" to the basic description when:
    - Proper shipping name or hazard class does not include the word "poisonous" or "toxic"
    - Material meets the definition of Division 6.1 Packing Group I or II
  - When materials meet the poisonous or toxic-by-inhalations criteria:
    - "Poison Inhalation Hazard" or "Toxic Inhalation Hazard" must appear after the shipping description
    - Include the hazard zone
- Elevated-temperature materials
  - Liquid materials that meet the definition of an elevated-temperature material must be disclosed on the shipping papers
  - If the words "Molten" or "Elevated temperature" are not part of the proper shipping name, add "HOT" before the proper shipping name
- Organic peroxides and self-reactive materials
  - Statement of approval of the classification and conditions of transport (when notification or competent authority approval is required)
  - Control and emergency temperatures for Division 4.1 or 5.2 materials requiring temperature control during transport
  - The word "SAMPLE" for any transported samples of Division 4.1 or 5.2 materials

Include an **emergency response telephone number** on the shipping paper following the shipping description (number must be staffed by knowledgeable person at all times during shipment) (see 49 CFR 172.604 for exceptions)

### Certification and Manifest

The shipper must sign the appropriate certifications declaring the hazardous materials prepared in accordance with the HMR.

#### Certifications

- Domestic – for domestic transportation only
- International – can be used for domestic and international transportation



- Air transportation – declares that applicable air transportation requirements have been met; two copies must be provided
- Radioactive materials
  - Required for transport on passenger-carrying aircraft
  - Intended for research or medical purposes

### **Certification Exceptions**

The shipper does not have to complete a shipper's certification when:

- Offering hazardous materials – other than hazardous waste – for transport by highway
- Materials are being transported:
  - In a cargo tank supplied by the carrier
  - By the shipper as a private carrier (unless the material is being reshipped or transferred to another carrier)
- Transporting an empty rail tank car with hazardous material residue

### **Shipping Exceptions**

The HMR requires shippers to identify and describe MOST hazardous materials on shipping papers, but there are exceptions. The most common exceptions include shipments of:

- Hazardous materials in small quantities (49 CFR 173.4)
- Certain agricultural materials (49 CFR 173.5)
- Materials of Trade (MOT) (49 CFR 173.6)
- Certain U.S. Department of Energy and U.S. Department of Defense shipments (49 CFR 173.7)
- Limited quantity miscellaneous hazardous materials (49 CFR 172.200(b)(3))
- Hazardous materials transported by non-regulated forms of transportation
  - Shippers must identify and describe regulated materials on shipping papers when they are:
    - Classified as a hazardous substance, hazardous waste or marine pollutant
    - Transported by the regulated mode of transport

### **Hazardous Waste Manifest**

Hazardous waste shipments require:

- Shipper's certification
- Term manifest or hazardous waste manifest (HWM)
  - EPA Form 8700-22 completed in accordance with 40 CFR 262.20
  - Manifest document number
  - Name and EPA identification numbers for the shipper, each carrier and the disposal facility
  - Any applicable state requirements
  - Be dated and hand-signed by the shipper (or their agent) and the initial carrier accepting the waste for transportation
  - Accompany the shipment
  - Copies must be given to each carrier and the designated disposal facility

## Appendix A: Sample Basic Descriptions

Number of Units & Container Type	HM	BASIC DESCRIPTION Identification Number, Proper Shipping Name, Hazard Class(es), Packing Group	TOTAL QUANTITY (Weight, Volume, Unit of Measure)	WEIGHT (Subject to Change)	CLASSIFICATION	CHARGES (For Carrier Use Only)
5 Drums	X	UN 1005, Ammonia, anhydrous, 2.2, 0.2 percent water	50 gallons			
5 Drums	X	UN 1075, Liquified petroleum gas, 2.1, Noncorrosive	50 gallons			
1 Box	X	UN 1432, Sodium phosphide. 4.3, 6.1 PG I, Cargo Aircraft Only	5 kilograms			
1 Drum	X	UN 1971, Methane, compressed or natural gas, compressed (with high methane content), 2.1, DOT-113 – Maximum operating speed 15 mph. Do Not Hump or Cut Off Car While in Motion	10 gallons			
500 Drums	X	UN 1993, Flammable liquids, n.o.s, 3, PG III (Furan & Acetone) Flash Point -20 Degrees Celsius, Shipper: USAC, 101 West Plaza, NY, NY 10001	25,000 gallons			
5 Drums	X	UN 1760, Corrosive liquids, n.o.s. (contains Formic acid, Hydrochloric acid), 8, PG III	50 gallons			
5 Drums	RQ	UN 2315, Polychlorinated biphenyls, liquid (PCGs), 9, PG II, Marine Pollutant	275 pounds			
1 Bottle	X	UN 2032, Nitric acid, red fuming, 8 (5.1) (6.1), PG I, POISON INHALATION HAZARD, ZONE B	1.5 ounces			
1 Tank	X	UN 1999, HOT Tars, liquid, 3, PG III	3,000 pounds			
1 Carton	X	UN 1352, SAMPLE of Titanium powder, wetted, 4.1, PG II STATEMENT OF APPROVAL OF THE CLASSIFICATION AND CONDITION OF TRANSPORT. I hereby approve and certify the classification of the contents herein described. Signature_____. Date 8-1-23. Control/Emergency Temperature 1,660 Degrees Celsius	20 kilograms			

# Sample Bill of Lading

Page 1 of 1

Shipper Number: \_\_\_\_\_

Reference Number: \_\_\_\_\_

Date: \_\_\_\_\_

(Name of Carrier)

<b>TO:</b> Consignee: On "collect for delivery" shipments the letters "COD" must appear before consignee's name		<b>FROM:</b> Shipper:	
Street:		Street:	
City/State:	Zip Code:	City/State:	Zip Code:
Route:		Vehicle Number:	

Number of Units & Container Type	HM	DESCRIPTION Identification Number, Proper Shipping Name, Hazard Class(es), Packing Group	TOTAL QUANTITY (Weight, Volume, Unit of Measure)	WEIGHT (Subject to Change)	CLASSIFICATION	CHARGES (For Carrier Use Only)
5 Drums	X	UN 1956, Compressed gases, n.o.s., 2.2, DOT-SP 4052	50 gallons			
5 Drums	X	UN 1956, Compressed gases, n.o.s., 2.2, Ltd Qty	50 gallons			
5 Drums	RQ	UN 3082, Environmentally Hazardous Substances, Liquid, n.o.s., 9, PG III, (Amitrole)	454 kilograms			
5 Drums	X	UN 1814, RESIDUE: Last Contained Potassium Hydroxide, Solution, 8, PG II	50 gallons			

By signing this Bill of Lading, carrier acknowledges possession of placards and Emergency Response Information for hazardous materials described above.

**Placarded:**

☐ Yes ☐ No ☐ Affixed

**Type of placards offered:**

<b>EMERGENCY CONTACT 24-HOUR NUMBER:</b>	<b>Emergency Response Information provided on:</b> Guide # <input type="checkbox"/> Form <input type="checkbox"/> SDS <input type="checkbox"/>
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Name / Contract #		
REMIT C.O.D. TO: ADDRESS:	C.O.D. Amount \$ _____	C.O.D. fee: Prepaid <input type="checkbox"/> Collect <input type="checkbox"/>
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing that: "The agreed declared value of the property specifically stated by the shipper is to be but not exceeding \$ _____ per: _____"	(Signature of Consignee)	TOTAL CHARGES: \$ _____ FREIGHT CHARGES: \$ _____

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all the terms and conditions of the NMFC Uniform Straight Bill of Lading.

The carrier shall not make delivery of this shipment without payment of freight and other lawful charges.

Shipper Signature

<b>SHIPPER SIGNATURE/DATE</b>  This is to certify that the above-named materials are properly classified and are in proper condition for transportation according to the applicable conditions of the DOT.	Trailer Loaded:  <input type="checkbox"/> By Shipper <input type="checkbox"/> By Driver	Freight Counted:  <input type="checkbox"/> By Shipper <input type="checkbox"/> By Driver/ pallets said to contain <input type="checkbox"/> By driver/ pieces	<b>CARRIER SIGNATURE / PICKUP DATE</b>  Carrier has acknowledged receipt of packages and required placards. Carrier certifies emergency response information was made available and/or carrier has the DOT emergency response guidebook or equivalent documentation in the vehicle.
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