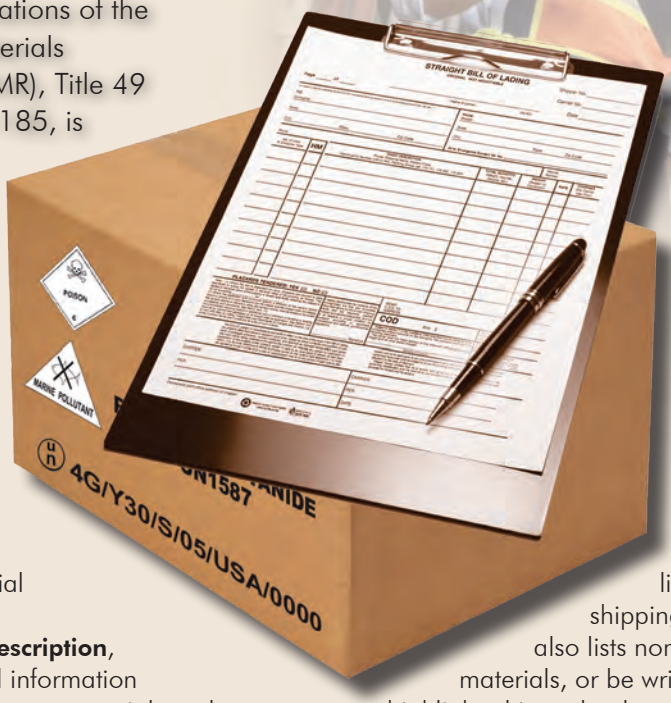
Guide for Preparing

SHIPPING PAPERS

One of the most frequently cited safety violations of the Hazardous Materials Regulations (HMR), Title 49 CFR Parts 100-185, is the failure of the shipper to properly describe the hazardous material on their shipping paper.



The proper shipping description of a hazardous material consists of:

- a **Basic Description**,
- additional information (depending on materials and mode of transport),
- quantity of hazardous material, and
- type of packaging used.

The **Basic Description** of a hazardous material includes the **Identification Number**, the **Proper Shipping Name**, **Hazard Class**, and **Packing Group** (when applicable). This information must be placed on the shipping paper in the specific order required in Part 172, Subpart C of the HMR. By failing to follow these requirements, shippers of hazardous materials not only put themselves at risk of being cited, but more importantly, they put others at risk should an incident or spill occur.

The HMR do not require a shipper to use a special form—it requires the proper information be placed on the shipping papers in the proper sequence. Types of shipping papers used to describe hazardous materials may be bills of lading, invoices, manifests, or plain paper. They may or may not have specific columns identifying the hazardous material, but they must all meet HMR requirements describing the hazardous material.

Hazardous materials must be listed first on a shipping paper that also lists non-hazardous materials, or be written/highlighted in a clearly contrasting color. Alternatively, when a shipping paper has a column captioned "HM" for "hazardous materials," the letter "X" may be placed in that column indicating the hazardous material's description will follow.

Consistent with the requirements of the HMR, this Guide: (1) explains the shipping paper requirements; (2) provides examples of shipping paper entries and formats, including the emergency response telephone number; (3) provides guidance regarding emergency response information; and (4) provides general procedures for retaining shipping papers. Section 172.200 may be checked to identify instances when shipping papers are not required.

Throughout this Guide, "bold" characters are used to highlight required information for the Basic Description. Also, the acronym "**ISHP**" is used to show the proper sequence of information required with the Basic Description.

NOTE: This document is for general guidance only and should not be used to determine compliance with 49 CFR, Parts100-185.

1 SHIPPING PAPER CHECKLIST

You should always check the HMR, Part 172, Subpart C, for specific Shipping paper requirements that may pertain to the materials you are shipping.

Use the following as a guide; additional information may be required.

Shipping Description (§172.202)

The acronym "**ISHP**" spells out the proper sequence of the **Basic Description,** as shown:

Basic Description (proper sequence §172.202(b))

Use the Hazardous Materials Table (HMT) (§172.101)

- I ☐ **I**dentification Number (HMT Column 4)
- S ☐ Proper **S**hipping Name (HMT Column 2)
- H ☐ **H**azard Class (HMT Column 3)
- P ☐ **P**acking Group (HMT Column 5)

Other Information (§172.202)

① ☐ Technical name ("G" in HMT Column 1). See HMR §172.203(k) for specific requirements.

② ☐ Subsidiary hazard(s) (HMT Column 6)

③ ☐ Number and type of packages (i.e., "12 drums" or "12 1A1 drums")

④ ☐ Total quantity (by mass or volume, i.e., "200 kgs" or "50 L")

CONVERSION TABLE
1 lb = .454 kg; 1 gal = 3.785 L

⑤ ☐ "Net Explosive Mass" for Class 1. See HMR §172.202(a)(5)(i) for specific requirements.

⑥ ☐ "EX-xxxx" for Class 1 materials when required. See HMR §172.320(d) for specific requirements.

Additional Descriptions – as applicable (§172.203)

☐ "DOT-SPxxxxx" Special Permit

☐ "Ltd Qty" or "Limited Quantity"

⑦ ☐ "RQ" for Reportable Quantity. See Table 1 to Appendix A of the HMT for specific requirements.

☐ "RESIDUE: LAST CONTAINED***" (Required for tank car with residue)

⑧ ☐ "Marine Pollutant" (for non-bulk by vessel and bulk in all modes). See Appendix B of the HMT for specific requirements.

⑨ ☐ "Poison-Inhalation Hazard" or "Toxic-Inhalation Hazard" and applicable Hazard Zone, e.g., "Zone A," "Zone B,", etc., (HMT Column 7 and §172.102)

☐ "HOT" for liquid elevated temperature materials, when molten or elevated temperature is not part of proper shipping name. See HMR §172.203(n) for specific requirements.

☐ "Organic Peroxides" See HMR §172.203(o) for specific requirements.

☐ "Waste" See HMR §172.102 for specific requirements.

☐ "Radioactive Material" See HMR §172.203(d) for specific requirements.

⑩ ☐ Mode Requirements - Additional information may be required depending on specific mode(s) of transport. See HMR §172.203 for specific requirements.

Emergency Response Telephone Number (§172.201(d), §172.604)

⑪ ☐ "EMERGENCY CONTACT: xxx-xxx-xxxx" (include international access code, if applicable). Offeror's name must appear directly before, after, above, or below the ER number unless clearly visible elsewhere.

⑫ ☐ If the ER number has been contracted with a capable agency, you must include the offeror's name or the contract number.

Shipper's Certification (§172.204)

⑬ ☐ Signed statement: "This is to certify that the above-mentioned materials..." See HMR §172.204 for specific certification statements.

2 §172.101 HAZARDOUS MATERIALS TABLE EXCERPTS

Symbols (1)	Hazardous Materials Descriptions and Proper Shipping Names (2)	Hazard Class or Division (3)	Identification Numbers (4)	PG (5)	Label Codes (6)	Special Provisions (§172.102) (7)	(8) Packaging (§173.***) Exceptions (8A)	Non-bulk (8B)	Bulk (8C)	(9) Quantity Limitations Passenger aircraft/rail (9A)	Cargo aircraft only (9B)
	Acrolein, stabilized	6.1	UN1092	I	6.1, 3	1, B9, B14, B30, B42, B77, T22, TP2, TP7, TP13, TP38, TP44	None	226	244	Forbidden	Forbidden
	Copper cyanide	6.1	UN1587	II	6.1	IB8, IP2, IP4 T3, TP33	153	204	242	25kg	100kg
G	Flammable liquids, n.o.s	3	UN1993	I II III	3 3 3	T11, TP1, TP27 IB2, T7, TP1,TP8, TP28 B1, B52, IB3, T4, TP1, TP29	150 150 150	201 202 203	243 242 242	1L 5L 60L	30L 60L 220L
	Phosphoric acid solution	8	UN1805	III	8	A7, IB3, N34, T4, TP1	154	203	241	5L	60L

SHIPPING DESCRIPTIONS

Hazardous and Non-hazardous Materials*

No. of Units & Container Type ③	HM	BASIC DESCRIPTION Identification Number (UN or NA), Proper Shipping Name, Hazard Class, Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.) ④
1 Box		Carriage Bolts	1000 lbs
4 Drums	X	UN1805, Phosphoric acid solution, 8, PGIII	4 gal
1 Drum	X	UN1993, Flammable liquids, n.o.s.	18 gal
		(contains methanol), 3, PGIII ①	
		⑩ This shipment is within limitations for cargo aircraft only.	

*When not listed first, use a contrasting color or highlight the **Basic Description**, and/or place an "X" in the "HM" column when provided.

Toxic Inhalation and Subsidiary Risk

No. of Units & Container Type	BASIC DESCRIPTION Identification Number (UN or NA), Proper Shipping Name, Hazard Class, Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)
③	②	④
10 drums	UN1092, Acrolein, stabilized, 6.1(3), PGI, Toxic-Inhalation Hazard, Zone A ⑨	1 gal

Reportable Quantity and Marine Pollutant

No. of Units & Container Type	HM	BASIC DESCRIPTION Identification Number (UN or NA), Proper Shipping Name, Hazard Class, Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)
③		⑦	④
1 Box	X	RQ, UN1587, Copper Cyanide, 6.1, PGII, Marine Pollutant	10 lbs
	⑦	⑧ OR	
1 Box	RQ	UN1587, Copper Cyanide, 6.1, PGII, Marine Pollutant	10 lbs
		⑧	

Explosives

No. of Units & Container Type	BASIC DESCRIPTION Identification Number (UN or NA), Proper Shipping Name, Hazard Class, Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)
③		⑤
1 Box	UN0030, Detonators, electric, 1.1B, PGII, EX-number (as applicable) ⑥	.008 Net Explosive Mass

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Hazardous Materials Table

The first step in filling out a shipping paper correctly is to refer to the Hazardous Materials Table (HMT) §172.101 and find the entry that most appropriately describes the hazardous material(s) you are shipping. This information, known as the Basic Description, will include the **I**dentification Number in Column 4, Proper **S**hipping Name in Column 2, **H**azard Class or Division in Column 3, and **P**acking Group in Column 5. If a material has one or more subsidiary hazards, they are identified in Column 6. Subsidiary hazards must be listed with the Basic Description.

Codes listed in columns 1 and 7 indicate there is additional information regarding the hazardous material being shipped—some of which may be required to be entered with the Basic Description. For example, a "G" in Column 1 indicates that the Proper Shipping Name listed must be further identified by the addition of a "technical name" placed in parentheses. The chemical manufacturer or the material safety data sheet should provide this information. Special provision codes listed in Column 7 are defined in §172.102.

After the material is identified in the HMT, Appendices A and B also must be checked. Appendix A is a List of Hazardous Substances and Reportable Quantities (RQ). If the material is listed in Appendix A, you must determine if it meets the definition of the hazardous substance(s) prescribed in §171.8. If it does, and the quantity per package meets or exceeds the RQ amount listed, an additional step must be taken to identify it as a reportable quantity on the shipping paper. (See HMR §172.203(c) for specific requirements.)

Appendix B lists Marine Pollutants. *Non-bulk* packages of hazardous materials that meet the definition of marine pollutant must be marked as such when transported by vessel. When transported by any mode, marine pollutant *bulk* packages must be identified on the shipping papers. (See HMR §172.203(l) for specific requirements.)

Shipping Description

A correct shipping description includes many components, including the Basic Description, which must be placed on a shipping paper in the sequence required in §172.202(b) of the HMR. An easy way to remember this sequence is to refer to the acronym "ISHP": Identification Number, Shipping Name, Hazard Class or Division, and Packing Group.

If a technical name is required, it must be placed in parentheses and listed after the Proper Shipping Name or Basic Description. If applicable, a subsidiary hazard class(es) must be placed in parentheses immediately following the primary hazard class.

The total amount of hazardous materials covered by each description must be indicated by mass or volume with the applicable unit of measure. For example: "200 kgs" or "50 L." The number and type of packages also must be indicated and may include the packaging specification, for example: "12 drums," "12 1H1 drums," or "12 drums (UN 1A1)." The total quantity and types of packagings may be entered before, after, or both before and after the Basic Description.

Additional Description

When additional information is required or provided it must be listed after the Basic Description, unless the HMR states otherwise. Looking at the "Check List" in this guide, you will see many of these identified under Additional Descriptions. Always check §172.203 of the HMR to ensure you have identified all the requirements that pertain to your shipment.

Two exceptions to the regulation for placing additional information after the Basic Description pertain to the "Technical name" and the letters "RQ." The "Technical name" may be placed in parentheses after the Proper Shipping Name or after the Basic Description. The "RQ" may be entered either before or after the Basic Description. On a shipping paper with columns specifically identifying hazardous materials, the "RQ" may replace the "X" normally placed in that column.

Some hazardous materials, such as radioactive materials, require much more specific information than is covered here. Always use Part 172, Subpart C, of the HMR for specific details and other information pertaining to your shipment.

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SAMPLE SHIPPING PAPER

STRAIGHT BILL OF LADING

Shipper No. _____

Carrier No. _____

Page _____ of _____ (Name of carrier) (SCAC) Date _____

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: Consignee

Street

City State Zip Code

FROM: Shipper Offeror's Name

Street

City ⑫ State Zip Code

CONTRACT # ⑪ 800-555-1234

24 hr. Emergency Contact Tel. No.

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
③		I S H P	④			
4 Drums	X	UN1805, Phosphoric acid solution, 8, PGIII	4 gal			
		EMERGENCY CONTACT: 1-800-555-1234 ⑪				
		OR				
		S H I P				
4 Drums	X	Phosphoric acid solution, 8, UN1805, PGIII	4 gal			
		EMERGENCY CONTACT: 1-800-555-4321 Offeror's name or contract# ⑫				

Basic Description sequence and UN Harmonization. The examples shown above are currently allowed in § 172.202(b). Mandatory compliance for the **ISHP** sequence begins January 1, 2013. This guide provides examples using the **ISHP** sequence.

PLACARDS TENDERED: YES ☐ NO ☐

Note – (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3)Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

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

⑬

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES

FREIGHT PREPAID Check box if charges are to be collected except when box at right is checked ☐

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

RECEIVED, subject to classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER	CARRIER
PER	PER
	DATE

Permanent post-office address of shipper

PRINTED ON RECYCLED PAPER USING SOYBEAN INK PRINTED WITH SOY INK

Shipper's Certification

Persons offering hazardous materials for transportation shall certify their shipment is offered in accordance with the HMR. Several options for certification statements are listed in §172.204. Specific statements are required for air shipments. The following is an example of one certification statement: "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." These certifications must be signed by a principal, officer, partner, or employee of the shipper or his agent. They may be signed manually, by typewriter, or by other mechanical means.

Retention

The person providing the shipping paper shall record the date the hazardous material is accepted by the carrier (this may vary for rail, vessel, or air), and maintain a copy or electronic image of this shipping paper for two years. The copies must be accessible at or through the

principal place of business; and must be made available if requested by an authorized official of a Federal, State, or local government agency at reasonable times and locations. See HMR §172.201 for specific requirements.

Emergency Response Telephone Number

Shipping papers must contain an emergency response telephone number unless specifically excepted in HMR §172.604(c). This number must include the area code or international access code and be monitored at all times while the material is in transit or in storage incidental to transportation. The person answering must be knowledgeable of the hazardous materials being shipped, or must allow immediate access to a person with that knowledge. This person must be able to assist first responders at the scene of an incident involving the hazardous material, e.g., fire or explosion hazards, protective clothing required, and evacuation distance, etc. Answering services, answering machines, or beepers are not permitted.

The emergency response telephone number may be entered after the shipping description or located in a designated area on the shipping paper clearly visible and easily identified, for example: "EMERGENCY CONTACT: xxx-xxx-xxxx." If the number is placed in one location, it must apply to all hazardous materials described on the shipping paper. If separate emergency numbers are needed for different materials, the corresponding emergency response number must be entered after the shipping description to which it applies. The telephone number may be the number of the person offering the shipment or the number of a hired agency or organization as long as the person monitoring it has the most current information on the material and accepts responsibility for providing this information in an emergency. (Many agencies require a fee to provide this service.)

NOTE: As of October 1, 2010, mandatory compliance with final rule HM-206F, amends the HMR as follows:

- Emergency response (ER) numbers outside the United States must contain the international access code, i.e., "+" (plus sign), country code, and city code as appropriate.
- When entered only once on the shipping paper, the ER number must be prominent, clearly visible, and easily found. Highlighting with larger font or contrasting color may be used.
- If the ER number is the number of the offeror (shipper), the offeror's name must appear directly before, after, above, or below the ER number unless the offeror's name is entered elsewhere on the shipping paper—clearly visible and easily located.
- If the ER number corresponds to a capable agency or organization hired to provide the required emergency information services, they must be given the appropriate emergency information by the offeror. The offeror's name or contract number must appear directly before, after, above, or below the ER number so it is prominent, clearly visible, and easily found.
- A person preparing shipping papers for continued transportation in commerce must include the information identified above as outlined in §172.604. If they assume responsibility for providing the ER number, they must ensure all requirements are met.

Emergency Response Information

The HMR requires that a shipment of hazardous materials includes "emergency response information" on the shipping paper itself or attached to it. This emergency response information would be used in the event of an incident involving hazardous materials to assist emergency responders at the scene. At a minimum, this information must include: (1) the Basic Description (including technical name, if applicable), (2) immediate hazards to health, (3) risks of fire or explosion, (4) immediate precautions to be taken in the event of an accident or incident, (5) immediate methods for handling fires, (6) initial methods for handling spills or leaks in the absence of fire, and (7) preliminary first aid measures. For additional and specific requirements, check Part 172, Subpart G of the HMR.

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
http://hazmat.dot.gov

SafeTravel
SAFETY TIPS FOR TRAVELERS
HTTP://SAFETRAVEL.DOT.GOV

GOT A HAZMAT QUESTION?
http://hazmat.dot.gov
INFO-LINE
1-800-467-4922

PHH50-0121-1110