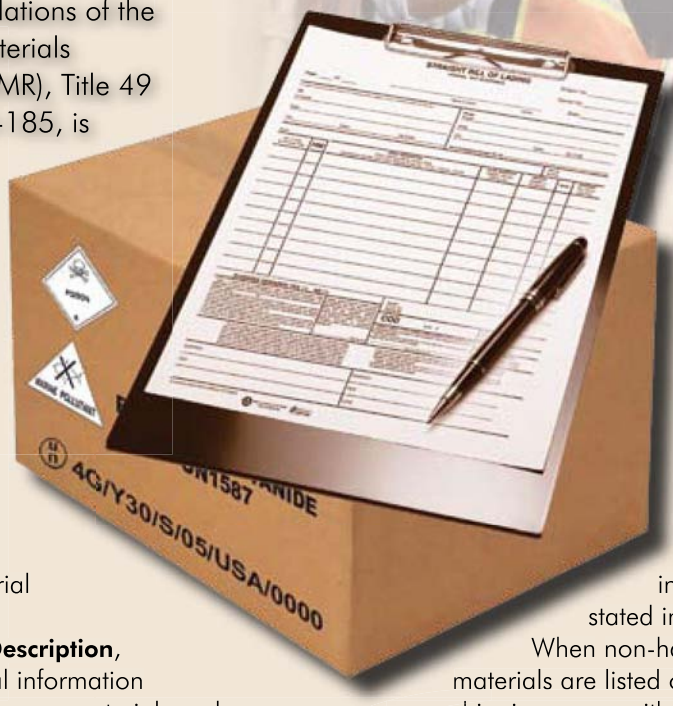
Guide for Preparing

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 the 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 that a shipper use a special form. The HMR only require the proper information be placed on the shipping paper in the proper sequence. Shipping papers used to describe hazardous materials may be bills of lading, invoices, manifests, or just plain papers. They may or may not have specific columns to identify the hazardous material, but when used to ship a hazardous material, they must all meet the same requirements to describe the hazardous material using the information stated in the HMR.

When non-hazardous materials are listed on the same shipping paper with hazardous materials, the hazardous materials must be listed first, or be entered in a clearly contrasting color, or highlighted in a contrasting color to distinguish them from non-hazardous materials. Alternatively, when a shipping paper has a column captioned "HM" for "hazardous materials" the letter "X" may be placed in that column, indicating the description that follows identifies a hazardous material.

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) general procedures for retaining shipping papers. Section 172.200 may be checked to identify instances when shipping papers are not required.

Throughout this Guide we have used "**bold**" characters to assist you in identifying the information that is required for the **Basic Description**. We also use the acronym "**ISHP**" to assist you in remembering the components of the **Basic Description**.

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

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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)

Use the acronym "**ISHP**" to assist in remembering the proper sequence of the **Basic Description**

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 not marked on the package. See HMR §172.320(d) for specific requirements.

Additional Descriptions – as applicable (§172.203)

☐ "DOT-SPxxxxx" or "DOT-Exxxxx" Special Permit or Exemption number

☐ "Ltd Qty" or "Limited Quantity"

⑦ ☐ "RQ" for Reportable Quantity. See 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 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 §171.101(c)(9) 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).

Shipper's Certification (§172.204)

⑫ ☐ 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, B72, 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
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 10 drums	② UN1092, Acrolein, stabilized, 6.1(3), PGI, Toxic-Inhalation Hazard, Zone A ⑨	④ 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, 800-555-1234	10 lbs
	⑦	⑧ OR ⑪	
1 Box	RQ	UN1587, Copper Cyanide, 6.1, PGII, Marine Pollutant, 800-555-1234	10 lbs
		⑧ ⑪	

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 1 Box	UN0030, Detonators, electric, 1.1B, PGII, EX-number (as applicable) ⑥	⑤ .008 Net Explosive Mass

Hazardous Materials Table

The first step in filling out a shipping paper correctly is to look in the Hazardous Materials Table (HMT) §172.101, and find the entry that most appropriately describes the material you are shipping. Information used to describe a hazardous material on a shipping paper is known as the **Basic Description**. Information for the Basic Description consists of the **Identification Number** in Column 4; the **Proper Shipping Name** in Column 2; the **Hazard Class** or **Division** in Column 3; and the **Packing Group** in Column 5. If a material has one or more subsidiary hazards, they are identified in Column 6. Subsidiary hazards must also be listed with the Basic Description. By using the information provided in the HMT, you can correctly describe the hazardous materials shipment.

Columns 1 and 7 provide codes that may indicate additional information about the material you are shipping. 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. They may identify additional information about the material that may be required to be entered in addition to the Basic Description.

Once you have identified the material in the HMT, the process is not yet complete. Appendix A and Appendix B to the HMT must also 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 prescribed in §171.8. If it does, and the quantity per package meets or exceeds the amount listed, an additional step must be taken to identify it as a reportable quantity on the shipping paper. (See HMR §172.203 for specific requirements.)

Appendix B is a list of Marine Pollutants. When shipping non-bulk packages and a hazardous material meets the definition of a marine pollutant, it must be identified as a marine pollutant if any portion of transportation is by vessel. A marine pollutant in bulk packages must be identified on the shipping papers when transported by any mode. (See HMR §172.203(l) for specific requirements.)

Shipping Description

A correct shipping description includes many components, including the Basic Description. The **Basic Description** must be placed on a shipping paper in the sequence called for in §172.202(b) of the HMR. An easy way to remember the sequence is to use the acronym "**ISHP**": **I**-**I**dentification Number, **S**-Proper **S**hipping Name, **H**-**H**azard Class or Division, and **P**-**P**acking Group.

If a technical name is required, it must be placed in parentheses and may be listed after the Proper Shipping Name or after the 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 must also 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 or after the Basic Description 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 that has a column specifically to identify a hazardous material, the "RQ" may replace the "X" that would normally be placed in that column.

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

SAMPLE SHIPPING PAPER

STRAIGHT BILL OF LADING
ORIGINAL NOT NEGOTIABLE

Shipper No. _____
Carrier No. _____
Date _____

Page ____ of ____ (Name of carrier) (SCAC)

TO: Consignee
Street
City State Zip Code

FROM: Shipper
Street
City State Zip Code
24 hr. Emergency Contact Tel. No. ⑪ 800-555-1234

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			
		OR				
		S H I P				
4 Drums	X	Phosphoric acid solution, 8, UN1805, PGIII	4 gal			

Basic Description sequence and UN Harmonization.
The examples shown above are allowed in § 172.202(b). For international shipments, the **ISHP** sequence is mandatory January 1, 2007. Voluntary compliance for Domestic shipments begins January 1, 2007. Mandatory compliance for the **ISHP** sequence is 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(d) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(d) 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.
⑫
Signature

REMIT C.O.D. TO: ADDRESS
COD Amt: $
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)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $
TOTAL CHARGES: $
FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collected

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
PER
CARRIER
PER
DATE

Permanent post-office address of shipper

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Shipper's Certification

Except as provided in the HMR, each person who offers a hazardous material for transportation shall certify the 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.

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Retention

The person who provides 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 from that date. 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 as provided in HMR §172.604(c). The emergency response telephone number must include the area code or international access code. The number provided is used in case of an emergency involving the hazardous material. The number must be monitored at all times while the material is in transportation or in storage incidental to transportation. The person monitoring the number must be knowledgeable of the hazardous material being shipped and have information that will assist first responders at the scene of an incident involving the hazardous material; e.g., fire or explosion hazards, protective clothing required, evacuation distance. If not knowledgeable, the person answering must have immediate access to a person who has that knowledge. An answering service, answering machine, or beeper does not meet these requirements.

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

Emergency Response Information

The HMR require that a shipment of hazardous materials include "emergency response information" which may be on the shipping paper itself or attached to the shipping paper. This emergency response information can be used in the event of an incident involving hazardous materials to assist emergency responders in responding 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 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, you should 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

PHH50-0086-1206