



U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**



UNDERSTANDING MATERIALS OF TRADE (MOTs)



The contents of this guide do not have the force and effect of law and are not meant to bind the public in any way. This guide is intended only to provide information to the public regarding existing requirements under the Hazardous Materials Regulations.

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ARE YOU TRANSPORTING HAZARDOUS MATERIALS?

Do you carry HAZMAT as part of your job?

Liquid fuels, paint thinners, pesticides, and even lithium cells and batteries are all classified as hazardous materials (hazmat), because they can pose an unreasonable risk to health, safety, and property when transported in commerce (§ 171.8)

Whether you are self-employed or work for a large company, it is your responsibility to know if you are dealing with hazmat. One possible starting point for determining whether a product you transport is hazmat is to consult the product's **SAFETY DATA SHEET (SDS)**, provided by the manufacturer. This should include a transportation hazard classification for the product, with a four-digit ID number, a proper shipping name, the hazard class, and the packing group for the product (in Section 14: Transportation Information, per the example on page 5).

You are responsible for transporting hazmat in accordance with the Hazardous Materials Regulations (HMR; 49 CFR Parts 171 – 180), including properly classifying and packaging the materials with all required hazard communication. These requirements may be dependent upon the quantity and hazard of the specific material (see the **HAZARDOUS MATERIALS TABLE (HMT)** § 172.101).

Department of Transportation hazmat regulations only apply to the transportation of hazardous materials **IN COMMERCE**.

In other words, they do not apply if you are transporting hazmat for non-commercial purposes in a private motor vehicle.

SAFETY DATA SHEET EXAMPLE

SECTION 14

Section 1: Identification

Product Name: Spirit Lacquer Thinner

Product Code: 02252022

Other means of Identification: N/A

Product type: Liquid

Relevant identified uses of the substance or mixture and uses advised against: Paint, stain, and varnish thinning

Manufacturer: Wandering Artist's Paint
6 Golden Tree Ln
Limgrave, CA 94129
(415) 835-1174

Emergency contact information: Calling Bell 24 Hour Emergency Services
US/Canada: (800) 310-4000
International: +1 415 310 4000

Section 2: Hazard Identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazard Classification:

FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 32.2% (oral), 51% (dermal), 51% (inhalation)

Signal Word: Danger

Hazard Statements:

Highly flammable liquid and vapor.
Harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Description hazards not otherwise known: N/A

Section 14: Transport Information

U.S. DOT Classification: UN1263, Paint related materials, 3, II

- **UN Number:** UN1263
- **Proper Shipping Name:** Paint related materials
- **Hazard Class:** Class 3 (flammable liquids)
- **Packing Group:** II
- **Hazardous Substance:** No
- **Marine Pollutant:** No

TDG, ICAO and IMDG: UN1263, Paint related materials, 3, II



MATERIALS OF TRADE

or MOTs, are a certain category of hazmat which, when transported in small quantities as part of a business, are subject to fewer HMR requirements due to the limited hazard they pose.

WHY DO MOTs MATTER TO YOU?

MOTs are hazmat, other than a hazardous waste, that are carried on a **MOTOR VEHICLE** in certain quantities to:

- protect the health and safety of the motor vehicle operator or passengers, such as insect repellent or a fire extinguisher;
- support the operation or maintenance of a motor vehicle (including its auxiliary equipment), such as a spare battery or gasoline; or
- directly support a principal business of a private motor carrier (including vehicles operated by a rail carrier) that is other than transportation by motor vehicle – for example, chemicals for landscaping, pest control, painting, or plumbing services, or gases for welding.

There is an exception for MOTs that provides less stringent regulatory requirements. When transported in accordance with § 173.6 of the HMR, the following requirements are **NOT** applicable to MOTs:

- Shipping papers
- Emergency response information
- Placarding
- Formal training or retention of training records.

The following HMR limitations and requirements **DO** apply to MOTs*:

- Material limitations;
- Quantity limitations;
- Packaging, marking, and labeling requirements; and
- General knowledge of MOTs (found in § 171.8).

*See § 173.6 “Materials of trade exceptions.”

The MOTs exception does not apply to transport of these hazardous materials by other modes of transport, including by aircraft or vessel.

In addition, the exception does not apply to these materials when in motor vehicles

TRANSPORTED BY FERRY.



LIMITATIONS AND REQUIREMENTS FOR MOTs

QUALIFYING HAZARDOUS MATERIALS

MOTs are limited to the following hazard classes or divisions:

CLASS OR DIVISION	DESCRIPTION	EXAMPLES
Division 2.1	Flammable Gases	acetylene, propane
Division 2.2	Non-flammable Gases	oxygen, nitrogen
Class 3	Flammable or Combustible Liquids	paint, paint thinner, gasoline
Division 4.1	Flammable Solids	charcoal
Division 4.3	Dangerous When Wet Materials	fumigants, metal powders (e.g., magnesium, zinc)
Division 5.1	Oxidizers	bleaching compounds
Division 5.2	Organic Peroxides	benzoyl peroxide
Division 6.1	Poisons	pesticides
Division 6.2	Infectious Substances**	diagnostic specimens
Class 8	Corrosive Materials	muriatic acid, drain cleaners, battery acid
Class 9	Miscellaneous Hazardous Materials	lithium batteries, asbestos, self-inflating lifeboats

** Only Div. 6.2 materials, *other than a Category A infectious substance*, contained in human or animal samples being transported for research, diagnosis, investigational activities, or disease treatment or prevention, or that is a biological product or regulated medical waste (§ 173.6(a)(4))

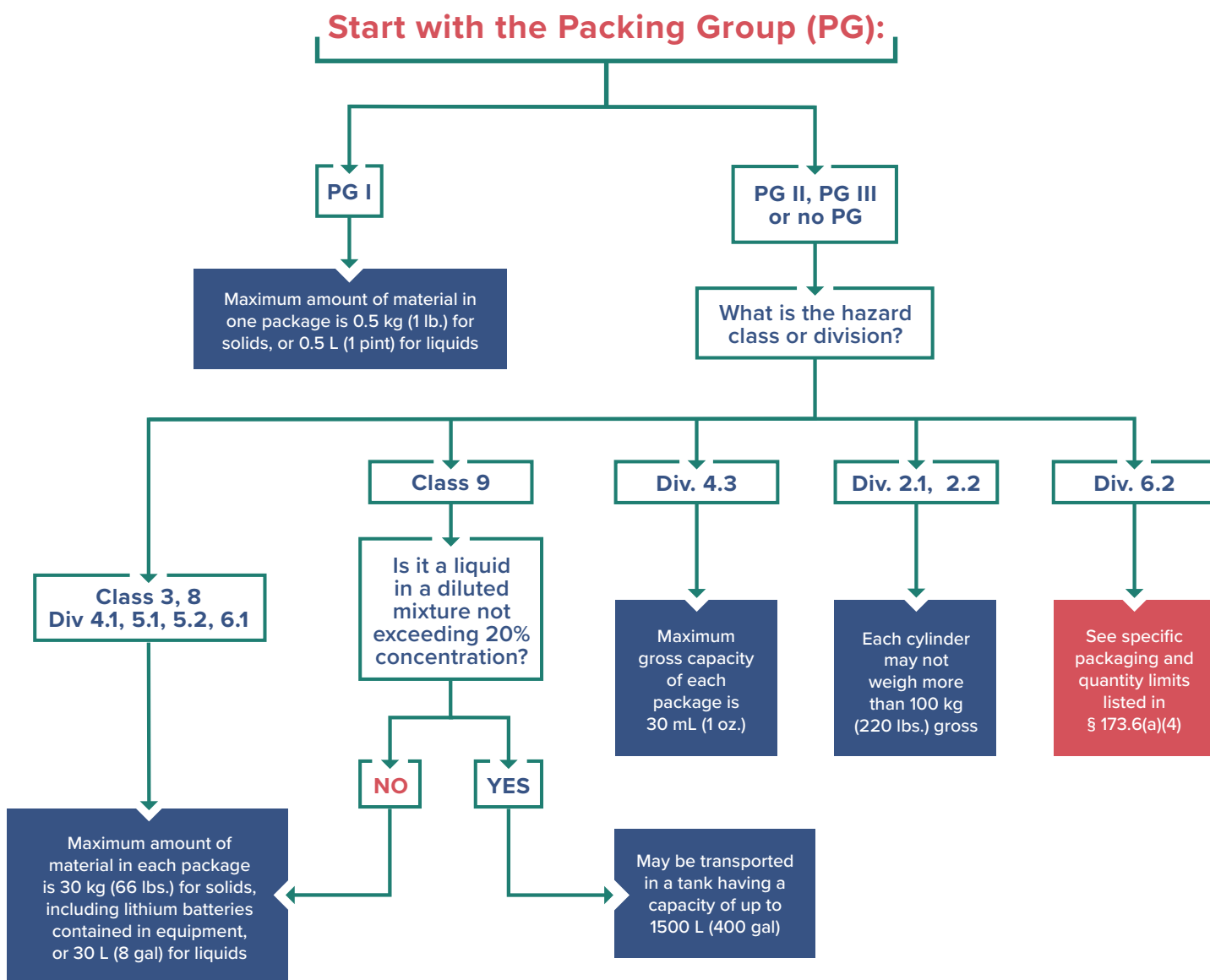
Materials and products that are classified into any other hazard class or division (e.g., Class 1 Explosives, Division 2.3 Poison by Inhalation Gases) are **NOT ELIGIBLE** to be transported under the MOTs exception.

QUANTITY LIMITS

Use the flow chart below to determine the quantity limitations per package of a given MOT, based on Packing Group (PG) and hazard class/division. You can find the PG and hazard class/division listed in Section 14 of the SDS, columns 5 and 3 (respectively) of the Hazardous Materials Table, or as part of the Basic Description on previous shipping paper(s). Note that the aggregate gross weight of all MOTs—that is, the total weight of all hazardous materials and its packaging loaded on a single vehicle—may not exceed 200 kg (440 lbs.). ***

BE CAREFUL!

MOTs have strict quantity limitations. If you exceed these limits, the material will be fully regulated under the HMR.



***Not including diluted mixtures (not exceeding 2 percent concentration) of Class 9 materials

PACKAGING AND MARKING REQUIREMENTS

MOTs MUST BE PACKAGED AND MARKED AS FOLLOWS:

Packaging	Marking
<ul style="list-style-type: none">• The packaging must be the manufacturer’s original packaging or of equal or greater strength and integrity.• Packagings must be leak tight for liquids and gases and sift proof for solids.• Packages must be properly closed, secured against movement, and protected against damage.• Outer packagings are not required for receptacles (such as cans or bottles) that are secured against movement in cages, bins, boxes, or compartments.• Gasoline must be transported in a metal or plastic container meeting HMR or OSHA requirements (see §§ 173.6(b)(4) and 173.202 in the HMR).• Cylinders and pressure vessels must conform to HMR requirements, except that outer packagings are not required.	<ul style="list-style-type: none">• The packaging must be marked with either a common name (such as “gas” or “spray paint”) or a proper shipping name from the HMR (such as “isopropyl alcohol”).• A tank containing a diluted mixture (not more than 2% concentration) of a Class 9 material must be marked with the identification number on two opposing sides.• Cylinders and pressure vessels must be marked with the proper shipping name and identification number and have a hazard class warning label.• If the package contains a reportable quantity of a hazardous substance, it must be marked “RQ” (reportable quantities are found in Appendix A of Section 172.101 in the HMR).

Division 6.2 infectious substances must be contained in a combination packaging which meets the following requirements:

MATERIAL	REQUIREMENT
Liquids	<ul style="list-style-type: none">• Inner packaging must be leakproof• Outer packaging must contain sufficient absorbent material to absorb the entire contents of the inner packaging.
Sharps	<ul style="list-style-type: none">• Inner packaging (sharps container) must be constructed of a rigid material resistant to punctures and securely closed to prevent leaks or punctures.• Outer packaging must be securely closed to prevent leaks or punctures.
Solids, Liquids, Sharps	<ul style="list-style-type: none">• Outer packaging must be a strong, tight packaging securely closed and secured against shifting, including relative motion between packages, within the vehicle on which it is being transported.



QUESTIONS ABOUT MOTs?

While MOTs exceptions offer relief from certain HMR requirements, remember that these materials are still hazmat. To operate under MOTs, you must adhere to all the requirements listed in § 173.6—including all quantity restrictions.

Concerned that your operational needs might exceed MOTs quantity limitations? Contact the Hazardous Materials Info Center at (1-800-467-4922) or via email at INFOCNTR@DOT.GOV for answers to your questions. PHMSA also provides compliance assistance resource on our [PUBLICATIONS PAGE](#), including guides to hazmat law, registration, hazmat training programs, transportation requirements, and more.

For additional information contact:
The Hazardous Materials Info Center

1-800-HMR-4922

(1-800-467-4922)

Email: infocntr@dot.gov

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