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## **Since 2008**

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## What are the Packaging and Marking Requirements for MOTs?

Materials of Trade also have packaging and marking requirements that help increase safety. The packaging must be the manufacturer's original packaging or a package of equal or greater strength and integrity. The packaging must be marked with a common name (such as "gas" or "spray paint") or a proper shipping name from the HMR (such as "Isopropyl Alcohol"). Additionally, the following other requirements apply to MOTs:

- Packagings must be leak tight for liquids and gases, and sift proof for solids.
- Packages must be securely 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 DOT or OSHA requirements (Section 173.6 (b) (4) and Section 173.202 in the HMR).
- Cylinders and pressure vessels must conform to the HMR except that outer packagings are not required. These cylinders 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.
- A tank containing a diluted mixture (not more than 2% concentration) of a Class 9 material must be marked on two opposing sides with the identification number.

## PHMSA Hazmat Safety Homepage

To learn more, visit the PHMSA Hazmat Safety Homepage on the Internet, at <http://hazmat.dot.gov>. There you can order training CD-ROMs, videotapes, and publications. You can also view or download the HMR, copies of the latest rulemakings, exemptions, clarifications of regulations, hazardous materials publications, and training schedules.



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## MOTs Video Available from the Pipeline and Hazardous Materials Safety Administration

To help you better understand Materials of Trade regulations, PHMSA has developed an informative video titled Understanding Materials of Trade Regulations. The video defines Materials of Trade; discusses what hazardous materials may be transported as MOTs; and provides an overview of what hazardous materials regulations apply. It is available from PHMSA's Office of Hazardous Materials Initiatives and Training for a shipping and handling fee of \$10.

The Understanding Materials of Trade Regulations video can be ordered on-line by visiting our web site at: <http://hazmat.dot.gov/pubs.htm>; by e-mail: [training@dot.gov](mailto:training@dot.gov); or by filling out the form below and faxing it to: (202) 366-7342, or mailing it to the address indicated at the bottom of the form.

Please send        Understanding Materials of Trade Regulations video(s) to:

Name: \_\_\_\_\_

Company: \_\_\_\_\_

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State/Zip: \_\_\_\_\_

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

Whether you are self-employed or work for a large company, you may be carrying hazardous materials as part of your job. A hazardous material is "a substance or material which has been determined by the U.S. Department of Transportation (DOT) to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce." This definition is found in the requirements for transporting hazardous materials known as the Hazardous Materials Regulations (HMR), issued by DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA.) The HMR tell you:

- how to classify and package hazardous materials;
- how the package must be marked and labeled;
- how to complete shipping papers;
- how to provide required emergency response information;
- whether the vehicle transporting hazardous materials must be placarded and the specific placards required; and
- what training is required for handlers and shippers of hazardous materials.

The HMR are published in Title 49, Code of Federal Regulations (49 CFR), Parts 171-180.

Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade.

## What Are Materials of Trade, and What Regulations Apply?

Materials of Trade (MOTs) are hazardous materials, other than hazardous waste, that are carried on a motor vehicle:

- to protect the health and safety of the motor vehicle operator or passengers, such as insect repellent or a fire extinguisher;
- to support the operation or maintenance of a motor vehicle (including its auxiliary equipment), such as a spare battery or gasoline; or
- to 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, landscaping, pest control, painting, plumbing, or welding services.

Be aware that it is your responsibility to know if you are transporting a hazardous material and the requirements in the HMR that apply.

The regulations that apply to MOTs are found in 49 CFR Section 173.6. They include:

- general knowledge of MOTs regulations;
- quantity limitations;
- packaging requirements; and
- marking and labeling requirements.

The MOTs regulations do not require:

- shipping papers;
- emergency response information;
- placarding; or
- formal training or retention of training records.

## What Hazardous Materials Qualify as MOTs?

To be a Material of Trade, the hazardous material must fit into any one of the following classes or divisions:

Class or Division	Examples
Flammable Gases (Division 2.1)	acetylene, propane
Non-flammable Gases (Division 2.2)	oxygen, nitrogen
Flammable or Combustible Liquids (Class 3)	paint, paint thinner, gasoline
Flammable Solids (Division 4.1)	charcoal
Dangerous When Wet Materials (Division 4.3)	some fumigants
Oxidizers (Division 5.1)	bleaching compounds
Organic Peroxides (Division 5.2)	benzoyl peroxide
Poisons (Division 6.1)	pesticides
Some Infectious Substances (Division 6.2)	diagnostic specimens
Corrosive Materials (Class 8)	muriatic acid, drain cleaners, battery acid
Miscellaneous Hazardous Materials (Class 9)	asbestos, self-inflating lifeboats
Consumer Commodities (ORM-D)	hair spray, spray paints

## What Quantity Limits Apply for Hazardous Materials being Transported as MOTs?

With the exception of tanks containing diluted mixtures of Class 9 materials, no more than a combined gross weight of 200 kg (440 lbs) of Materials of Trade can be transported on any one vehicle. Size limits for individual packages apply to Materials of Trade as described below:

- If a hazardous material is a high-hazard material (Packing Group I), the maximum amount of material in one package is 0.5 kg (one lb) for solids, or 0.5 L (one pt) for liquids.
- If the hazardous material is a medium or lower hazard – that is, if it belongs to Packing Group II or III, other than division 4.3, or is a consumer commodity (ORM-D) – the maximum amount of material in each package is 30 kg (66 lbs) for solids, or 30 L (8 gal) for liquids.
- For Division 4.3 materials (only Packing Group II and III materials are allowed) the maximum amount of material in each package is 30 ml (one oz.)
- Each cylinder containing a gas (Division 2.1 or 2.2) may not weigh more than 100 kg (220 lbs.)
- A diluted mixture of a Class 9 material (not exceeding 2% concentration) may be transported in a tank having a capacity of up to 1500 L (400 gal.)