



Office of Modal Safety & Security

Truck & Motor Carrier Safety

Carrier Resources - Materials of Trade

What Are Materials of Trade, and What Regulations Apply?

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.

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; or
- 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 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.

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) gasoline, paint, paint thinner
- 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

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;
- formal training or retention of training records.

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.)

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.

Example:

I am a landscaper; I carry gasoline to run my mowers. What will the inspector look for during a roadside inspection?

- Is the driver aware of the fact that gasoline is considered a hazardous material?
- Is the driver aware of the requirements of the materials of trade exemption?
- Is the gasoline carried in an approved container?
- Is the container properly marked with a common name such as gas, or gasoline?

- Does the container have a capacity of not more than 8 gallons?
- Is the container securely closed and leak proof?
- Is the container secured against movement, and protected against damage?
- Is the total weight of all Materials of Trade carried less than 440 pounds?

[Hazardous Material Regulations](#)  - For Materials of Trade Information, Go to Section CFR 49 173.6



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Assistenza
Linguistica



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Asistencia de idioma



语言援助