

U.S. Department of Transportation Hazardous Materials Regulations

The Hazardous Materials Regulations (HMR) are issued under the authority of the Hazardous Materials Transportation Act (HMTA) and can be found in the Code of Federal Regulations, Title 49, Parts 100 through 199. These regulations were compiled to promote the uniform enforcement of law and to minimize the dangers to life and property incident to the transportation of hazardous materials in interstate or foreign commerce (jurisdiction has been expanded to include intrastate commerce when hauling hazardous wastes or hazardous substances). Many states have enacted the HMR or closely follow the HMR for their intrastate operations.

Federal responsibility for enforcement of these regulations, as regards highway transportation, lies with the Department of Transportation's (DOT) Federal Highway Administration. The HMR provides for a criminal penalty of a fine of not more than \$25,000 or imprisonment for not more than 5 years, or both, for any person who willfully violates the HMTA (Section 107.333).

With regard to highway transportation of hazardous materials, the HMR apply to persons who offer these materials for transportation (shippers), those who transport the materials (carriers), and those who manufacture and retest the packaging and other containers intended for use with hazardous materials. The scope of transportation activity affected includes the packaging of shipments of hazardous materials, package markings (to show content) and labeling (to show hazard), vehicle placarding (to show hazard), handling procedures (such as loading and unloading requirements), care of vehicle and lading during transportation, and the preparation and use of shipping papers to show the identity, hazard class and amount of each hazardous material being shipped. The HMR also requires carriers to report in writing to DOT any unintentional release of a hazardous material during transportation. In certain cases an immediate report by telephone must be made in addition to the subsequent written report.

The HMR require that motor carriers make the prescribed regulations effective and that they thoroughly train their employees regarding the regulatory requirements (Section 177.800). Due to frequent revisions of the HMR, ongoing training is vital and training should be documented.

These regulations were compiled to promote the uniform enforcement of law and to minimize the dangers in interstate or foreign commerce.

Definitions

Hazardous material – A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce, and which has been so designated (Section 171.8).

Hazardous substance – A material, including its mixtures and solutions, that is listed in the Appendix to the Hazardous Materials Table (Section 172.101) in a concentration by weight which equals or exceeds the reportable quantity (RQ) of the material as shown in the following table (Section 171.8):

RQ pounds (kilograms)	
5000	(2270)
1000	(454)
100	(45.4)
10	(4.54)
1	(0.454)
Concentration by weight	
Percent	PPM
10	100,000
2	20,000
0.2	2,000
0.02	200
0.002	20

Hazardous waste – Any material subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

Compressed gas – Any material or mixture having in the container a pressure exceeding 40 PSIA at 70 degrees F., or a pressure exceeding 104 PSIA at 130 degrees F.; or any liquid flammable material having a vapor pressure exceeding 40 PSIA at 100 degrees F. (Section 173.000).

Flash point – The minimum temperature at which a substance gives off flammable vapors which in contact with a spark or flame will ignite.

Forbidden – Means that the material is prohibited from being offered or accepted for transportation. This prohibition does not apply if these materials are diluted, stabilized, or incorporated in devices and they are classed in accordance with the definitions of hazardous materials (Section 172.101(d)(1)).

Hazard Classes

The Hazardous Materials Regulations designate various hazard classes for hazardous materials. These hazard classes are defined as follows:

Blasting agent – A material designed for blasting which has been tested in accordance with the regulations and found to be so insensitive that there is very little probability of accidental initiation to explosion or of transition from deflagration to detonation (Section 173.114a).

Class A explosive – Explosives which function by detonation or are otherwise of maximum hazard (Section 173.53).

Class B explosive – Explosives which in general function by rapid combustion rather than detonation and include some explosive devices such as special fireworks, flash powders, some pyrotechnic signal devices and liquid or solid propellant explosives which include some smokeless powders (Section 173.88).

Class C explosive – Certain types of manufactured articles which contain Class A or Class B explosives, or both, as components but in restricted quantities, and certain types of fireworks (Section 173.100).

Combustible liquid – Any liquid that does not meet the definition of any other hazard class and has a flash point at or above 100 degrees F. and below 200 degrees F. (Section 173.115(b)).

Corrosive material – A liquid or solid that causes visible destruction or irreversible alterations in human skin tissue at the site of contact, or in the case of leakage from its packaging, a liquid that has a severe corrosion rate on steel (Section 173.240).

Etiologic agent – A viable microorganism, or its toxin, which causes or may cause human disease (Section 173.386).

Flammable liquid – Any liquid having a flash point below 100 degrees F. (Section 173.115(a)).

Flammable gas – Any compressed gas meeting the requirements for lower flammability limit, flammability limit range, flame projection, or flame propagation criteria as specified in the regulations (Section 173.300(b)).

Flammable solid – Any solid material, other than one classed as an explosive, which, under conditions normally incident to transportation, is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation hazard. Included in this class are spontaneously combustible and water-reactive materials (Section 173.150).

Irritating material – A liquid or solid substance which upon contact with fire or exposed to air gives off dangerous or intensely irritating fumes, but not including any poisonous materials Class A (Section 173.381).

Organic peroxide – An organic compound containing the bivalent -0-0- structure and which may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals (Section 173.151a).

ORM (Other regulated materials) – A material that may pose an unreasonable risk to health and safety or property when transported in commerce and does not meet any of the definitions of the other hazard classes or has been reclassified an ORM (Section 173.500).

Oxidizer – A substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter (Section 173.151).

Poison A – Poisonous gases or liquids of such nature that a very small amount of the gas, or vapor of the liquid, mixed with air, is dangerous to life (Section 173.326).

Poison B – Liquids or solids (including pastes and semisolids) which are known to be so toxic as to afford a hazard to health during transportation; or which, in the absence of adequate data on human toxicity, are presumed to be toxic to humans because of their effects on laboratory animals (Section 173.343).

Radioactive materials – Any material having a specific activity greater than 0.02 microcuries per gram (Section 173.403).

The loss prevention information and advice presented in this brochure are intended only to advise our insureds and their managers of a variety of methods and strategies based on generally accepted safe practices, for controlling potentially loss producing situations commonly occurring in business premises and/or operations. They are not intended to warrant that all potential hazards or conditions have been evaluated or can be controlled. They are not intended as an offer to write insurance coverage for such conditions or exposures, or to simply that Great American Insurance Company will write such coverage. The liability of Great American Insurance Company is limited to the specific terms, limits and conditions of the insurance policies issued.
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