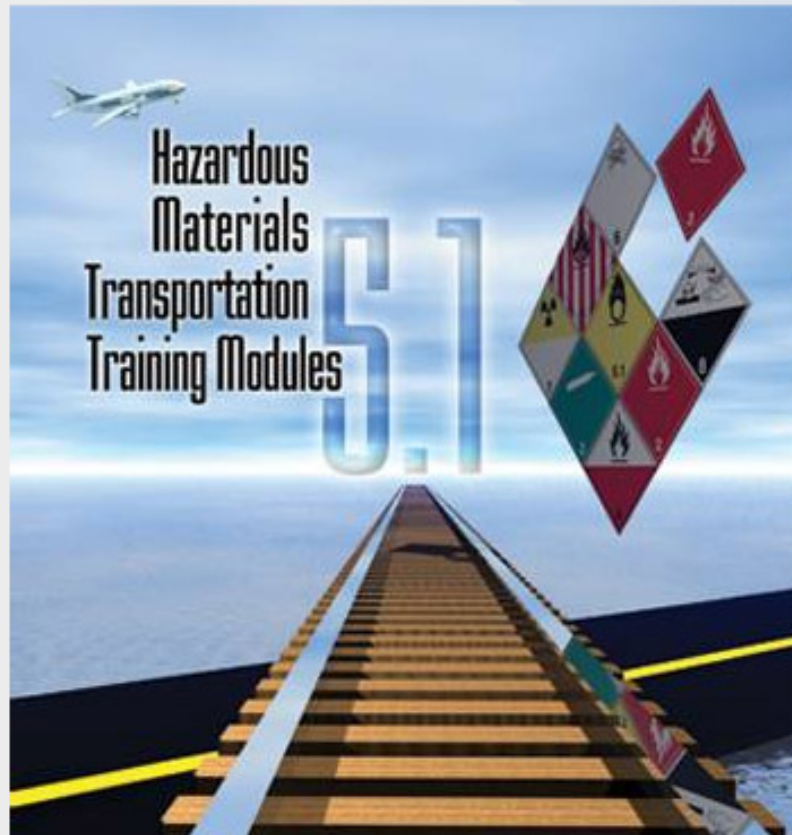


Introduction



U.S. Department of Transportation



Introduction Module Objectives

This introductory module should help you get familiar with our learning interface, as well as with some basic terms and tools associated with hazardous materials transportation. By the time you have completed the Introduction, you should be able to:

- Define the term "hazardous materials."
- Navigate through the Hazardous Materials Regulations, to locate given sections of the HMR.
- Summarize who must comply with the Hazardous Materials Regulations, which packages and containers the HMR apply to, what training is required, and what the possible penalties are for violating the HMR.



Four Billion Tons Transported Each Year



Hazardous Materials – A Part of Daily Life



Definition of Hazardous Materials

A hazardous material is defined as a substance or material, that when transported in commerce, is capable of posing an unreasonable risk to:

- health
- safety
- property



Hazardous Material Incidents Do Occur

In the simplest terms, this means any material that, because of its chemical properties, may cause injury, loss of life, or damage to property or the environment if involved in an accident during transportation. A minor transportation accident can quickly escalate into a major catastrophe when hazardous materials are involved.



The Hazardous Materials Regulations

Title 49, Code of Federal Regulations governs the transportation of hazardous materials. The Hazardous Materials Regulations or HMR are found in Parts 171 through 180 of Title 49, CFR. The contents of Parts 171 through 180 include:

- Part 171 – General information, regulations, and definitions
- Part 172 – Hazardous materials table, special provisions, hazardous materials communications, emergency response information, and training requirements
- Part 173 – Shippers – General requirements for shipments and packagings
- Part 174 – Carriage by rail
- Part 175 – Carriage by aircraft
- Part 176 – Carriage by vessel
- Part 177 – Carriage by public highway
- Part 178 – Specifications for packaging
- Part 179 – Specifications for tank cars
- Part 180 – Continuing qualification and maintenance of packagings



U.S. Department
of Transportation
**Federal Railroad
Administration**



Hazardous Materials Standards

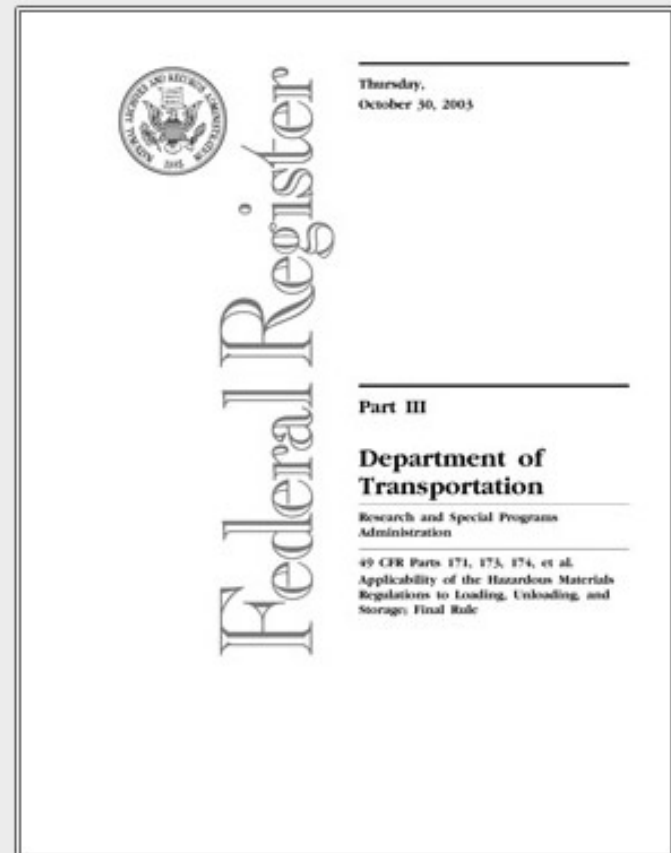
The Hazardous Materials Regulations set forth standards for:

- Classification
- Packaging
- Hazard communication
- Emergency response information
- Hazmat employee training
- Hazmat transportation
- Incident reporting
- Security



For Training Purposes Only

These modules are for training purposes only; they are not a substitute for the Hazardous Materials Regulations. In order to be sure you're in compliance with the regulations, refer to a current copy of the Hazardous Materials Regulations and the final rules published in the Federal Register. In the event of a discrepancy between these training modules and the current HMR, the HMR is the authoritative source.



Who Must Comply With the HMR?

No person may offer or accept a hazardous material for transportation in commerce unless ...

(c) Each person who performs a function covered by or having an effect on a specification or activity prescribed in part 178, 179, or 180 of this subchapter, an approval issued under this subchapter, or an exemption or special permit issued under subchapter A of this chapter, must perform the function in accordance with that specification, approval, or special permit, as appropriate.

(d) No person may offer or accept a hazardous material for transportation in commerce or transport a hazardous material in commerce unless that person is registered in conformance with subpart G of part 107

(e) No person may offer or accept a hazardous material for transportation in commerce unless

(e) No person may offer or accept a hazardous material for transportation in commerce unless the hazardous material is properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by applicable requirements of this subchapter or an exemption or special permit, approval, or registration issued under this subchapter or subchapter A of this chapter.

...as required or authorized by applicable requirements of this subchapter or an exemption or special permit, approval, or registration issued under this subchapter or subchapter A of this chapter.



[§171.2](#)
[§171.2\(e\)](#)

Misrepresenting Packaging or Containers

Section 171.2(g) – No person may represent, mark, certify, sell, or offer a packaging or container as meeting the requirements...

(g) No person may represent, mark, certify, sell, or offer a packaging or container as meeting the requirements of this subchapter governing its use in the transportation of a hazardous material in commerce unless the packaging or container is manufactured, fabricated, marked, maintained, reconditioned, repaired, and retested in accordance with the applicable requirements of this subchapter. No person may represent,

(g) No person may represent, mark, certify, sell, or offer a packaging or container as meeting the requirements

approval, or registration issued under this subchapter or subchapter A of this chapter unless the packaging or container is manufactured, fabricated, marked, maintained, reconditioned, repaired, and retested in accordance with the applicable requirements of the exemption, special permit, approval, or registration issued under this subchapter or subchapter A of this chapter. The requirements of this paragraph apply whether or not the packaging or container is used or to be used for the transportation of a hazardous material.



[§171.2\(g\)](#)

Required Hazmat Training

The Hazardous Materials Regulations require hazmat employers to certify the training of those employees who perform functions covered in the HMR, such as loading, unloading, or handling shipments of hazardous material incidental to their movement; preparing shipping papers; preparing hazardous material for transport; and operating a vehicle used to transport hazardous material. Training must include:

- General awareness/familiarization training
- Function-specific training (including modal-specific training)
- Safety training
- Security awareness training
- In-depth security training (some employers; see §172.800)

You can get additional information about Hazardous Materials Transportation Security Training at <http://hazmat.dot.gov>.



[§172.704](#)
[§172.700](#)

Penalties for Violating HMR

Violations of the Hazardous Materials Regulations may result in:

- Civil penalties: \$250 to \$100,000
- Criminal penalties: \$250,000 to \$500,000, plus up to ten years in prison

Hazardous Materials Training – It's the Law!

II.—LIST OF FREQUENTLY CITED VIOLATIONS—Continued		
Violation description	Section or cite	Baseline assessment
13. Failure to condemn a cylinder when required (e.g., permanent expansion of 10% [5% for certain exemption cylinders], internal or external corrosion, denting, bulging, evidence of rough usage).	180.205(i)	\$6,000 to \$10,800.
14. Failure to properly mark a condemned cylinder or render it incapable of holding pressure.	180.205(i)(2)	\$800.
15. Failure to notify the cylinder owner in writing when a cylinder has been condemned.	180.205(i)(2)	\$1,000.
16. Failure to perform hydrostatic retesting at the minimum specified test pressure.	180.209(a)(1)	\$2,100 to \$5,200.
17. Marking a star on a cylinder that does not qualify for that mark	180.209(b)	\$2,000 to \$4,000.
18. Marking a "+" sign on a cylinder without determining the average or minimum wall stress by calculation or reference to CGA Pamphlet C-5.	173.302a(b)	\$2,000 to \$4,000.
19. Marking a cylinder in or on the sidewall when not permitted by the applicable specification.	180.213(b)	\$6,000 to \$10,800.



[§171.1](#)
[§171.3](#)