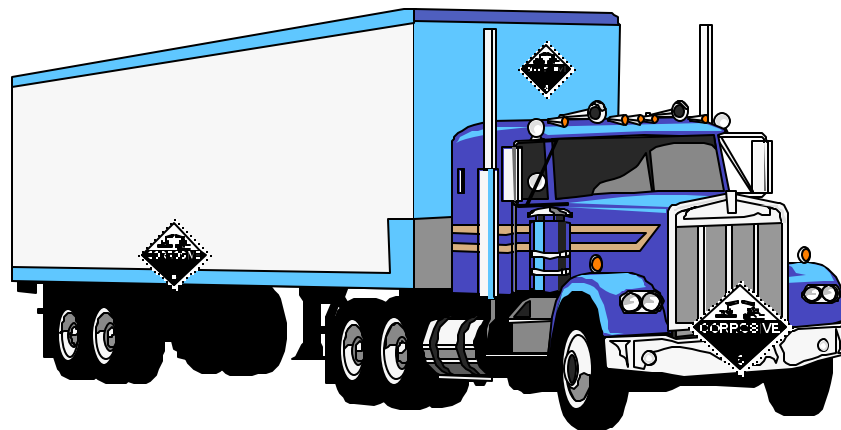


**BILINGUAL
HAZARDOUS MATERIALS
GENERAL AWARENESS TRAINING
Volume VII**

CARRIAGE BY HIGHWAY



TRANSPORTE POR CARRETERA

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10/01/98

Carriage by Public Highway (Subpart A)

Part 177 Applies to:

- K Private Motor Carriers
- K Common Motor Carriers
- K Contract Motor Carriers
- And
- K Motor Carriers materials and supplies
(This Subpart does not apply to material Excepted from shipping paper requirements.)

177.800(a); 177.817(d)

This section discusses requirements for hazardous materials accepted and/or transported by private, common and contract motor carriers. Part 177 requirements for highway transportation are in addition to those contained in Parts 171, 172, 173, 178, and 180 of the HMR.

Part 177 does not apply to hazardous materials that meet the definition of “Materials of Trade” which may include carrier materials and supplies for the operation of the equipment and the safety of the operator. In addition, it doesn't apply to material excepted from shipping paper requirements in 172.200 of the HMR.

Carriage by Public Highway

General Requirements

- All Motor Carriers Must Train Employees

Additional Training Required for Drivers of:

- Cargo Tanks
- A vehicle with a portable tank with a capacity of 1,000 gallons or more
- Motor vehicles carrying Class 7 (radioactive) material requiring placards

177.800(c); 172.700; 177.816(a)-(b); 397.101(e)

Motor carriers must comply with the HMR and train employees in the prescribed regulations.

Additional specific training is required for drivers of motor vehicles carrying two types of loads:

flammable cryogenic liquids in a cargo tank and

highway route controlled quantity (HRCQ) radioactive materials.

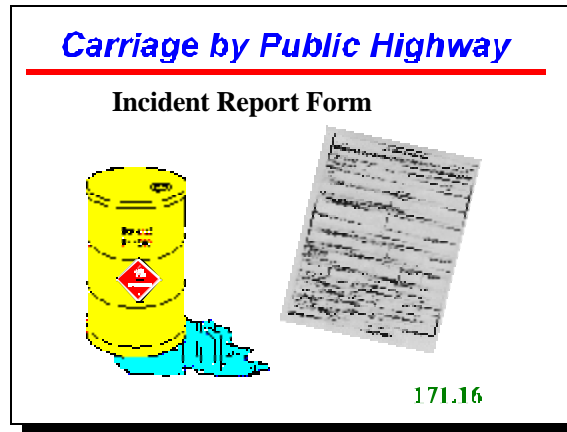
Carriage by Public Highway

Must Comply With The Federal Motor Carrier Safety Regulations



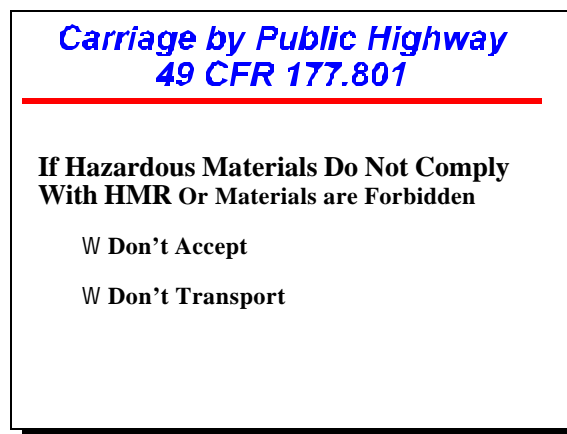
177.804

Motor Carriers transporting hazardous materials must comply with the Federal Motor Carrier Safety Regulations, 49 CFR Parts 390-397, as they apply.



Despite all safety efforts, accidents or incidents do occur. When a hazardous material is involved in a transportation incident, a report may be required. Reportable incidents may occur when the material is in transport, being loaded, unloaded or in temporary storage.

Reporting requirements are the responsibility of the carrier. Section 171.15 and 171.16 tell carriers when, how and to whom such reports must be made and the information required.

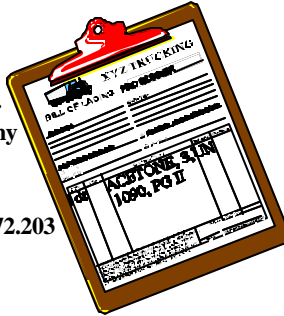


Motor carriers must replace lost or destroyed labels based on shipping paper information. Motor carriers may not transport hazardous materials unless the shipment is in full compliance with 49 CFR Parts 100-185.

49 CFR, 177.817(a)

Unless excepted:

- g Shipping paper
Must accompany
each shipment
- g Prepared IAW
172.200 thru 172.203



Unless an authorized exception is provided, all hazardous material shipments must be accompanied by a shipping paper. The shipping paper must be prepared in accordance with HMR, sections 172.200 through 172.203.

177.817(a)

Carriage by Public Highway

Shipping Paper Must be

- g Readily Available
- g Recognizable
 - o Tabbed
 - o Appear First



Shipping papers must be readily available and recognizable for inspection or in case there's an accident. Each motor carrier and driver of a motor vehicle containing hazardous material is responsible for this. Drivers and motor carriers must clearly distinguish shipping papers from all other papers.
Example: Tab or place the shipping paper first.

177.817(e)(1)

49 CFR 177.817(e)(2)(i)

(Driver at vehicle Controls)

Shipping Paper Must Be:

- " Within drivers immediate reach and,
- " Readily visible, or
- " In a holder mounted to inside of drivers door

When the driver is at the motor vehicle's controls, the shipping paper must be:

- Readily Visible
- in a holder mounted to the inside of the driver-side door or
- within immediate reach while driver is restrained by the seat belt.

177.817(e)(2)(ii)

49 CFR 177.817(e)(2)(ii)

(Driver Not at vehicle Controls)

Shipping Paper Must Be:

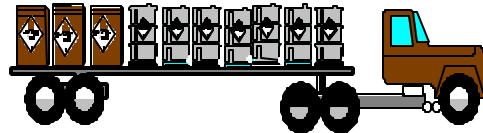
- " In a holder mounted to inside of drivers door, or
- " On the Drivers seat

When the driver is not at the motor vehicle's controls, the shipping paper must be:

- in a holder mounted to the inside of the driver-side door or
- on the driver's seat.

49 CFR 177 Subpart B

Loading and Unloading



SUBPART B - LOADING AND UNLOADING

General loading and unloading requirements for motor carriers cover issues such as:

- K** attendance requirements - cargo tanks;
- K** prohibited loading combinations;
- K** container safeguards:
 - precautions in transit,
 - securing against movement;
- K** accident/fire prevention:
 - fueling precautions,
 - use of cargo heaters,
 - smoking prohibitions and
 - keeping fire away from hazardous materials.

49 CFR 177.834

Cargo Tanks

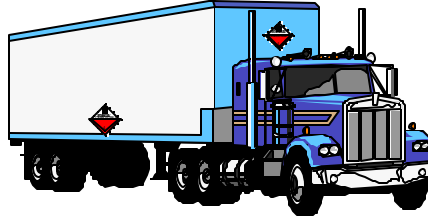


The HMR has special requirements for cargo tank motor vehicles. These vehicles may not be driven unless manhole closures are closed and secured.

All valve and other closures in liquid discharge systems must be closed and free of leaks. No Poison A (2.3 and 6.1 material), or irritating material may be loaded into or transported in a cargo tank.

49 CFR 177.835-177.843

Specific Requirements



There are special loading and unloading requirements for specific classes of hazardous material. These classes are: Explosives, flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases, poisons and radioactive materials.

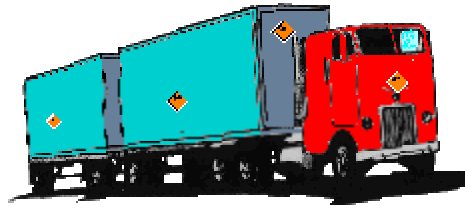
For these classes of material, loading and unloading rules are:

- vehicle engine must be turned off,
- cargo area interior must be free of projections--such as bolts, screws or nails--that could damage a package or container.

Considerable information relating to loading and unloading of motor vehicles is contained in HMR 177.835-177.843.

49 CFR 177.835

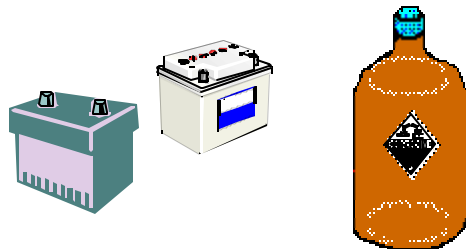
Class 1 Material



- tailgates must be closed,
- cargo must remain within the body of the vehicle and
- packages must be kept dry.

49 CFR 177.839

Class 8 Material



The HMR provides special instruction for storage batteries loaded with other cargo. Batteries must be loaded so other cargo does not fall onto or against them. Battery terminals must be adequately protected and insulated against short circuits.

49 CFR 177.840

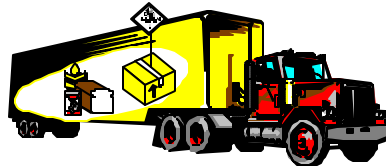
Class 2 Material



Cylinders containing compressed gas must be protected from damage. They must be:

- securely lashed in an upright position, or
- loaded into racks attached to the motor vehicle, or
- packed in boxes or crates or
- loaded horizontally

Poisons and Foodstuffs



177.841(e)(1)

There are special packaging requirements for POISON-labeled packages transported in the same motor vehicle with material marked or known to be foodstuff or feed. These carrier requirements apply when such packages are transported in a motor vehicle with any material intended for consumption by humans or animals.

A POISON-labeled package must be:

- overpacked in a metal drum as provided in packaging section 173.25(c) of the HMR, or
- Loaded into a closed unit load device and the foodstuffs, feed, or other edible material are loaded into another closed unit load device.

177.841(e)

Explanation and use of the segregation table follows:

Segregation Table for Hazardous Materials

Class or division	Notes	1.1 1.2	1.3	1.4	1.5	1.6	2.1
EXPLOSIVES 1.1 AND 1.2	A	*	*	*	*	*	X
EXPLOSIVES 1.3		*	*	*	*	*	X
EXPLOSIVES 1.4		*	*	*	*	*	O
VERY INSENSITIVE EXPLOSIVE	A	*	*	*	*	*	X
EXTREMELY INSENSITIVE EXPLOSIVE		*	*	*	*	*	
FLAMMABLE GAS 2.1		X	X	O	X		
NON-TOXIC GAS 2.2		X			X		
NONFLAMMABLE GAS 2.3							

49 CFR 177.848

To determine compatibility it is necessary to become familiar with two tables.

The segregation table is used for all hazardous materials. However, this table is only used for Class 1 materials when comparing a Class 1 material with another class.

The compatibility table for Class 1 materials (explosives) is used only when determining the compatibility of one Class 1 material with another Class 1 material.

Compatibility Table for Class 1

Compatibility group	A	B	C	D	E	F
A.....	X	X	X	X	X	X
B.....	X	X	X	4	X	X
C.....	X	X	X	2	X	X
D.....	X	4	2	X	2	X
E.....	X	X	2	2	X	X
F.....	X	X	X	X	X	X
G.....	X	X	X	X	X	X
H.....	X	X	X	X	X	X

49 CFR 177.848