

# Hazardous Materials Bulletin

## HIGHWAY TRANSPORTATION

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**December 2007**

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The U.S. Department of Transportation (USDOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), is responsible for writing the Federal Hazardous Materials Regulations (FHMR) for all modes of transportation. There are, however, two areas that are particular to highway transportation. Part 177 of the FHMR is written by RSPA, while Part 397 of the Federal Motor Carrier Safety Regulations (FMCSR) is written by the Federal Highway Administration (FHWA). Motor carriers are required to comply with both parts, as well as the rest of the FHMR and the FMCSR that may apply.

### **Part 397 (FHWA-FMCSR)**

Part 397, the *Transportation of Hazardous Materials: Driving and Parking Rules*, sets basic guidelines for motor carriers and drivers. It requires vehicles that are marked or placarded to comply with the FMCSR and similar state and local laws that do not conflict with federal standards.

Section 397.11 regulates the movement and parking of hazardous materials vehicles near open fires. Parking a hazardous material vehicle within 300 feet of an open fire is prohibited. No one may smoke or have lighted smoking materials within 25 feet of a vehicle transporting Classes/Divisions 1, 2.1, 3, 4.1, 4.2, or 5 materials, or an empty cargo tank that has been used to transport Division 2.1 or Class 3 materials. The 25 feet requirement includes the cab of the vehicle (§397.13).

When fueling vehicles transporting hazardous materials, someone must be in control of the process at the point the tank is being filled, and the engine must be off. Section 397.17 requires drivers to check all dual tires of the vehicle at the beginning and each time the vehicle is parked. Flat, leaking, or low air tires may be driven to the nearest safe place to perform repairs. Overheated tires, however, must be immediately removed and distanced from the vehicle.

Vehicles transporting divisions 1.1, 1.2, or 1.3 materials are required to carry certain documents in the vehicle, including a copy of Part 397, as well as instructions in case of accident or delay (§397.19).

There are a number of provisions that deal with the attendance and parking of vehicles transporting explosives. Sections 397.5 and 397.7 regulate attendance and parking; and §397.67 require a written route plan for division 1.1, 1.2 and 1.3 materials.

Subpart C of Part 397 sets the standards for state and local jurisdictions regarding the determination of routing restrictions for hazardous materials (except Class 7). The requirements for motor carriers are found in §397.67, which limits operation in tunnels, alleys, etc. Routing regulations for radioactive materials are found in Subpart D, with the motor carrier requirements in §397.101. Routing restrictions for Michigan can be found in the Federal Route Registry; they include the following:

<b><u>Route</u></b>	<b><u>Hazard Class</u></b>
Ambassador Bridge (Detroit) from Porter Street Windsor, ON.....	1, 3, 7, and 8
Blue Water Bridge, I-69, Port Huron to Sarnia, ON.....	Certain 1, 5, 7, 9, and all Pyrophoric liquids
I-696, Oakland County, from M-10 to I-75.....	1 and 3
International Bridge, I-75..... (906-635-5255)	All placarded loads require an escort
Mackinac Bridge, I-75, Mackinac City to St. Ignace..... (906)-643-7600)	All placarded loads require an escort

M-10 (Detroit) from 8 Mile Road (South) to Wyoming Road.....1 and 3  
And from Howard Street to Woodward Avenue (under Cobo Hall)

M-59 (Utica) 1.1 either direction from Mound Road exit.....1 and 3

Windsor Tunnel (Detroit) from Jefferson Avenue to Windsor, ON.....1, 3, 7, and 8

### **Part 177 (PHMSA-FHMR)**

Section 177.801 prohibits the acceptance or transportation of hazardous materials not in compliance with the FHMR.

Section 177.816 prescribes training for drivers beyond what is required in 172.700. It includes training on pre-trip inspections; vehicle controls and equipment; vehicle operations, including turning, backing, and braking, as well as crossing bridges, tunnels, and curves; and attendance and loading and unloading requirements. In addition, 177.816(b) requires specialized training for drivers of cargo tanks of any size and portable tanks of a capacity of 1,000 gallons or more. This specialized training must include information on liquid surge effects and the inspection and testing requirements. Recordkeeping and documentation is the same as required in 172.704.

Special requirements for shipping papers for highway transportation are in §177.817. Subsection (b) requires the shipper certification for the initial carrier, with exceptions for private carriers and cargo tanks supplied by the carrier. Subsection (c) discusses interlining with rail carriers, requiring notations on the shipping paper describing the freight container and the type of placards displayed. Subsection (e) outlines the options for identifying hazardous materials shipping papers from general freight shipping papers, as well as location requirements when the vehicle is in operation and when the driver is out of the vehicle.

Section 177.823 limits the movement of leaking hazardous materials vehicles, to prevent the spread of the incident, unless under the direction of certain officials or in order to protect life or property.

Subpart B of Part 177 covers Loading and Unloading, with general requirements (no smoking, keep fire away, packages secured in transit), and individual sections for particular classes or divisions. Subpart C is the Segregation and Separation Table, providing direction on what classes/divisions may or may not be transported together. The important item to remember with the Segregation Table is that subsidiary hazards must also be checked for compatibility. Motor carriers and shippers must ensure their personnel (including dock workers) are familiar with these provisions. The Segregation Table only applies to materials that are required to be labeled.

Subpart D (§177.854) allows for the disposition of leaking or broken packages by repair or over-packing; broken packages may be stored pending proper disposition.

Warning devices must be used for hazardous materials vehicles, per §177.854(f). For cargo tanks transporting class 3 or division 2.1, or any vehicle transporting divisions 1.1, 1.2, or 1.3 materials, Section 392.25 must be complied with. All other hazardous materials vehicles must comply with §392.22 for warning device display.

The use of heat, flame or sparking devices on vehicles required to be placarded (except combustible) is restricted under 177.854(g). Special precautions are required for classes/divisions 1.1, 1.2, 1.3, 2.1, and 3 materials (177.854(g)(2)(iv)). Subsection (h) goes beyond that, requiring any class 3 or division 6.1 vehicle to be "gas-free" prior to repair.

Hazardous materials transportation in vehicles transporting passengers for hire is severely restricted under the provisions of Subpart E of Part 177.

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Michigan State Police – Traffic Safety Division, [www.michigan.gov/motorcarrier](http://www.michigan.gov/motorcarrier)

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