2002 EDITION

INSTRUCTOR

Hazardous Materials Transportation Training Modules

MODULE 6A
Carrier Requirements (Highway)

U.S. Department of Transportation
Research and Special Programs Administration

Script

Visual

Narrative

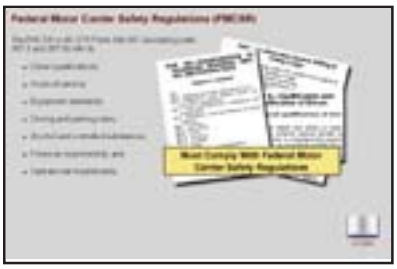
1

This module presents DOT's regulations regarding the carriage of hazardous materials on public highways by private motor carriers, common motor carriers and contract motor carriers. The content is based on Part 177 as well as the Federal Motor Carrier Safety Regulations that impact the transportation of hazardous materials.

2

This module addresses the requirements for hazardous materials accepted and/or transported by private, common and/or contract "for-hire" motor carriers as set forth in the Hazardous Materials Regulations in 49 CFR Part 177, "Carriage by Public Highway." Motor carriers and others subject to Part 177 must also comply with the Federal Motor Carrier Safety Regulations (FMCSR) when they apply. Part 177, requirements for highway, are in addition to those requirements contained in Parts 171, 172, 173, 178 and 180 of the HMR. Additionally, this module addresses applicable requirements of the FMCSR in 49 CFR Parts 390-397.

3



The FMCSR in 49 CFR Parts 390-397 (excluding 397.3 and 397.9) addressed in this module refer to driver qualifications, hours of service, equipment standards, driving and parking rules for transportation of hazardous materials, alcohol and controlled substances, financial responsibility, and operational requirements.

4

No person may offer or accept a hazardous material for transportation in commerce unless that person is registered, if required, and the hazardous material is properly classed, described, packaged, marked, labeled, and in proper condition for shipment in accordance with the HMR. Motor Carrier and offerer/shipper responsibilities frequently overlap. When a carrier performs a shipper function, the carrier is responsible for performing that function in accordance with the 49 CFR.

5

Both carriers and shippers are responsible to ensure their employees are properly trained as required by the HMR. Click on each button to learn more.

6

A “hazmat employee” is anyone employed by a hazmat employer who, during the course of employment, directly affects hazardous materials transportation safety including an owner-operator of a motor vehicle that transports hazardous materials. Except as provided in 172.704(c)(1), before any hazmat employee performs a function subject to the HMR, that person must be provided initial training in the performance of that function. Each hazardous materials employee must be periodically retrained at least every three years.

7

The driver training regulations in Part 177 illustrate how the Federal Motor Carrier Safety Regulations are sometimes closely linked to related rules in the HMR. Part 177.816 mandates training in the requirements found in the FMCSR Parts 390-397. Part 177.816(a)(2) requires training in areas such as vehicle controls and equipment, including emergency equipment. The exact equipment required is found in FMCSR Part 383.

8

Part 177.816 also requires additional training for operators of cargo tanks or vehicles with portable tanks as well as the appropriate state commercial driver's license, known as a CDL, required by FMCSR. Take some time to review the HMR training requirements cited in the references on this page.

Quick Review #1

Instructions: Select the term that correctly completes the statement.
Terms:

A. air	B. motor	C. Federal	D.Local
E. State	F. pickup	G. accept	H. train and test
I. guide			

1. The Carrier Requirements (Highway) Module discusses requirements in 49 CFR Part 177, for hazardous materials accepted and/or transported by private, common and/or contract _____ carriers.

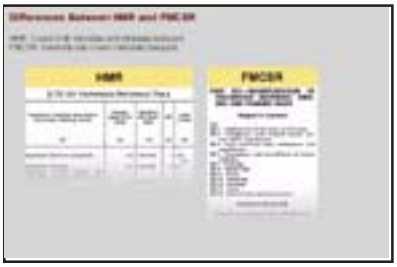
2. If you are subject to the HMR, Part 177, you must also comply with the _____ Motor Carrier Safety Regulations, to the extent that they apply.

3. Do not _____ or transport hazardous materials by motor vehicle unless the shipment complies with the HMR.

4. The HMR, Parts 172.700 and 177.800 require carriers to _____ their employees in the applicable HMR and FMCSR.

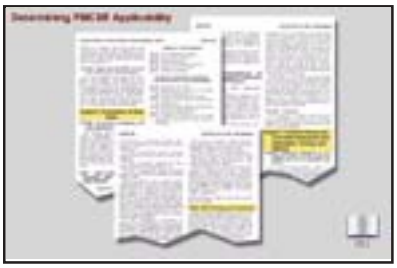
Correct Answers:
1. B motor
2. C Federal
3. G accept
4. H train and test

9



The jurisdiction of the HMR differs from that of the FMCSR. The HMR covers both interstate and intrastate transport. The FMCSR generally applies to interstate transportation — that is, between states — and not intrastate transportation, which stays entirely within a single state.

10



When determining which FMCSR regulations apply, it is also important to verify State regulations. The differences in regulations are important. The FMCSR regulations on drug and alcohol testing and CDL cover both interstate and intrastate transport, and FMCSR insurance regulations in some cases apply to intrastate as well as interstate transport. State, not Federal, regulations cover hours of service and qualification of drivers in strictly intrastate transport.

11

USDOT representatives are authorized to conduct unannounced inspections of all motor carrier records, equipment, packaging, and containers that may affect the safe transportation of hazardous materials. Unlike state and local police, they have the right of entry without probable cause or prior notification.

12

Many state statutes and municipal ordinances prohibit carriers from transporting hazardous materials on restricted highways and through public tunnels. Motor carriers have to obey those laws as well as Federal regulations unless an exemption has been authorized. The HMR does not nullify or supersede state statutes and municipal ordinances, regardless of the kind or quantity of hazardous materials. Part 177.810 requires compliance with local ordinances regarding public tunnels, and FMCSR 397.3 requires compliance with state and local laws unless they are in disagreement with specific Federal requirements.

13

Part 397 of the FMCSR covers driving and parking rules, including attendance and surveillance of parked vehicles and routing regulations for both radioactive and non-radioactive hazardous materials. The requirements for routing non-radioactive hazardous material shipments by motor vehicle are in the FMCSR 49 CFR Part 397, Subpart C. Routing requirements for radioactive hazardous materials are found in Subpart D.

14

Unless an authorized exception is provided, a shipping paper that is prepared in accordance with 172.200, 172.201, 172.202, and 172.203 must accompany all hazardous material shipments. Shipping papers must be retained for 375 days by the offeror and the carrier. General requirements for shipping papers are discussed in Module 2.

15

An initial motor carrier may not accept a hazardous material unless the shipping paper includes a properly completed shipper's certification.

Quick Review #2

Your task is to complete these statements based on the information presented in this topic.

ACROSS

1. Unless an authorized exception is provided, all shipments of hazardous materials must be _____ by a properly prepared shipping paper.

2. An initial motor carrier may not accept a hazardous material unless the shipping paper bears a completed shipper's _____ that complies with 172.204.

DOWN

1. The HMR covers both interstate and _____ transport.

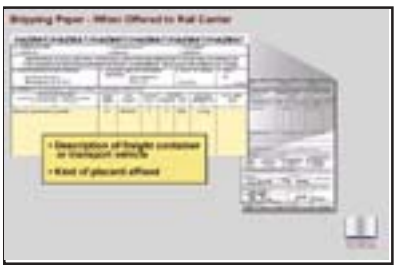
2. All motor carrier records, equipment, packagings and containers relating to the safe transport of hazardous materials must be available for _____ inspection.

3. Motor carriers transporting hazardous materials must comply with State statutes and municipal ordinances restricting access to highways and public tunnels unless an _____ has been authorized.

Correct Answers:

ACROSS	**DOWN**
1. accompanied	1. intrastate
2. certification	2. USDOT
	3. exemption

16



When a motor carrier offers a freight container or transport vehicle to a rail carrier, the shipping paper must be noted with a description of the freight container or transport vehicle, and the kind of placard affixed to the freight container or transport vehicle.

17

It is the responsibility of every motor carrier and driver to make sure that the shipping papers are readily available and accessible in case of an inspection or incident. In order to do this, shipping papers for hazardous materials must be clearly distinguished from all other shipping papers. This can be accomplished by tabbing the hazmat shipping papers, placing them on top of the stack of papers, or keeping them separate but still readily accessible. Click on the buttons to learn more.

18

When the driver is at the motor vehicle's controls, the shipping paper must be within the driver's immediate reach while restrained by a lap belt and readily visible to a person entering the driver's compartment or in a holder mounted on the inside of the driver's door.

19

When the driver is not at the motor vehicle's controls, the shipping paper must either be placed in the holder mounted to the inside of the driver's door, or placed on the driver's seat.

20

Marking and placarding requirements are found in Subparts D & F of Part 172 of the 49 CFR. Except in an emergency, a transport vehicle containing a hazardous material may not be moved unless it displays all required markings and placards. An improperly placarded or marked transport vehicle may be moved in an emergency, only if escorted by a state or local government representative; or the motor carrier has permission from the USDOT; or movement of the transport vehicle is necessary to protect life or property.

Quick Review #3

Instructions: Select the term that correctly completes each statement.
Terms:

A. accident	B. sleeping berth	C. incident	D. outside
E. seat	F. rail	G. truck	H. inside
I. emergency	J. infraction		

Statements:

1. For _____ transportation, motor carriers must mark the shipping paper with a description of the freight container or transport vehicle and the type of placard affixed.

2. Shipping papers must be kept readily available in case of an inspection or _____. Tab or clearly distinguish shipping papers from any other papers.

3. When the driver is at the motor vehicle's controls, the shipping paper must be visible and within reach or in a holder mounted on the _____ of the driver's door.

4. When the driver is not at the motor vehicle's controls, the shipping paper must be on the driver's _____ or in a holder mounted on the inside of the driver's door.

5. Except in an _____, a transport vehicle must not be moved unless it displays all required markings and placards.

Correct Answers:

1. F rail
2. C incident
3. H inside
4. E seat
5. I emergency

21

Broken or leaking containers in transit must be handled by the safest practice available. These packages may be repaired, if safe to do so. A broken or leaking package may be placed in a salvage drum in accordance with 173.3(c) and transported to its destination or returned to the shipper. To see the complete requirements for handling disabled vehicles and broken or leaking packages, review 177.854 in the HMR. Click on the buttons to learn more.

22

Hazardous materials must be loaded, blocked, braced, and unloaded in accordance with the prescribed safeguards found in 177.834(a-o).

23

When a leak in a cargo tank makes further transportation unsafe, the cargo tank should be removed from the traveled portion of the highway; every means should be employed for the safe disposal of the leaking material by preventing its spread over a wide area and preventing the contamination of streams and sewers; and all sources of ignition are not permitted.

24

Leaking cargo tanks may be moved only to the nearest place where the contents can be disposed of safely. The operator shall use all available means to prevent leakage or spillage on the highway.

Quick Review #4

Instructions: Select the term that correctly completes each statement.

Terms:

A. available	B. lost	C. disabled	D. loading	E. packing
F. placarding	G. difficult	H. unsafe	I.cumbersome	

Statements:

1. Hazard protection must be provided when vehicles become _____. Broken or leaking containers and other packages may be repaired or placed in a salvage drum for further transportation.

2. General requirements for _____ and unloading of hazardous materials are specified in 49 CFR 177.834.

3. When a leak in a cargo tank makes further transportation _____, the tank should be removed from the traveled portion of the highway, the leaking material contained to prevent contamination of streams and sewers, and all sources of ignition eliminated.

Correct Answers:

1. C disabled
2. D loading
3. H unsafe

25

Special requirements for the loading and unloading of motor vehicles are contained in 49 CFR 177.835-177.842. There are specific loading and unloading requirements for hazard classes 1 through 8. Additional attendance requirements are found in 49 CFR 397.5. Click on the buttons to learn more about these special requirements.

26

Specific requirements for Class 1 – Explosive Materials include:
The vehicle engine must be turned off during loading and unloading; the cargo area interior must be free of projections, such as bolts, screws or nails, that could damage a package or container; the tailgate must be closed; and the cargo must remain within the body of the vehicle.

27

Part 177 includes special requirements for cargo tank motor vehicles that transport Class 3 – (flammable liquid) materials. Cargo tanks must be bonded and grounded if the cargo tank is loaded through an open filling hole. Grounding and bonding is not required if the cargo tank is loaded or unloaded through a vapor tight connection into a stationary tank provided the metallic connection is in contact with the filling hole.

28

Part 177 provides special requirements for storage batteries containing electrolyte if loaded with other cargo. A storage battery must be loaded so other cargo does not fall onto or against it. Battery terminals must be adequately protected and insulated against short circuits.

29

A cylinder containing compressed gas must be protected from damage. It must be:
securely lashed in an upright position, loaded into racks attached to the motor vehicle, packed in boxes or crates, or loaded horizontally.
Please view 49 CFR 177.840(a) to familiarize yourself with the special requirements associated with compressed gas.

30

Part 177 provides special requirements for packages labeled “TOXIC” or “POISON”. Packages labeled “TOXIC,” “POISON,” or “POISON INHALATION HAZARD” may not be transported in the same motor vehicle with foodstuff, feed or edible material unless the package is overpacked in a metal drum as provided in 173.25(c) of the HMR, or loaded in a closed unit load device and the foodstuff, feed, or edible material is loaded in another closed unit load device.

31

A package labeled "TOXIC," "POISON", "TOXIC GAS," "POISON GAS," or "POISON-INHALATION HAZARD" may not be transported in the driver's compartment or sleeper berth of a motor vehicle.

32

Packages bearing the "POISON" label and displaying the text "PG III" or displaying a "PG III" mark adjacent to the Poison label must also be kept separate from foods, feed, or other edible materials. Refer to 177.841(e)(3) for separation requirements.

33

Transport Index, known as TI, is the radiation reading one meter from the package containing radioactive material. The number of radioactive material packages in a storage location or transported in a motor vehicle is limited so that the total transport index number does not exceed 50. The TI is placed on the label of a package to designate the degree of control to be exercised by the carrier during transportation. The total TI is the sum of the TI on the labels of individual packages and overpacks. The TI is used to determine the minimum separation distance in meters or feet to the nearest undeveloped film in various stages of transportation. The limitation that the total transport index number may not exceed 50, does not apply to exclusive use shipments, meaning motor vehicles used only to transport that material or commodity by a single shipper. "Exclusive use" and "transport index" are defined in 173.403 of the HMR.

34

Look at the two packages labeled “RADIOACTIVE”. One package reflects a TI of 1.0. The second package reflects a TI of 1.5. The total TI is 2.5; this is well under the 50 TI limit. In a motor vehicle, a package of “RADIOACTIVE YELLOW-II” or “RADIOACTIVE YELLOW-III” labeled packages must be kept away from areas used by humans, animals, or undeveloped film in accordance with the minimum separation distances prescribed in the table in 177.842(b). The distance is computed from the table on the basis of the total TI. Add the TI numbers on the labels of individual packages and overpacks. Assuming a total TI of 2.5, locate the total TI in Column one of the 177.842 table. Next, follow across the table to the last column and find the minimum distance in meters and/or feet to any area of persons or the minimum distance from dividing partition of cargo compartments. For a TI of 2.5, the minimum distance is 0.6 meters or 2 feet.

35

No group of “RADIOACTIVE YELLOW-II” or “RADIOACTIVE YELLOW-III” labeled packages may have a total TI of more than 50 in any single storage location. Each group of packages must be handled and stowed no closer than 6 meters (20 feet) to any other such group, measured edge to edge.

36

Each motor vehicle used to transport radioactive materials under exclusive use conditions must be checked for radiation contamination after each use. The examination must be performed with radiation detection instruments. A motor vehicle may not be returned to service until the radiation dose rate meets acceptably low levels. The requirements applicable to radioactive surface contamination of a motor vehicle under exclusive use do not apply to any vehicle used solely for transporting Class 7 (radioactive) materials under the conditions and limitations specified in 177.843(b).

37

Vehicles used solely for transporting Class 7 (radioactive) materials must be stenciled with the words "For Radioactive Materials Use Only." The stencil lettering must be at least three (3) inches high in a conspicuous place on both sides of the vehicle exterior. Also, these vehicles must be kept closed "at all times" except when being loaded or unloaded.

Quick Review #5

Your task is to complete these statements based on the information presented in this topic.

ACROSS
1. The Total Transport Index number (TI) on packages of _____ materials in a motor vehicle or storage area must not exceed 50 TI.

2. "RADIOACTIVE YELLOW-II" or "RADIOACTIVE YELLOW-III" labeled packages must not exceed _____ TI in any one group of packages in any one storage location.

DOWN
1. A package bearing a _____, "POISON" or "POISON-INHALATION HAZARD" label must not be transported with food or feed unless overpacked according to the HMR.

2. A package labeled "TOXIC", "POISON", "TOXIC GAS", POISON GAS", or "POISON-INHALATION HAZARD" is not permitted in the _____ compartment or sleeper berth of a motor vehicle.

3. Vehicles used solely for transport of radioactive materials must be marked "For Radioactive Materials Use _____".

4. Special loading and unloading requirements and safety precautions for _____ hazard classes of materials are found in 49 CFR 177.835 through 177.842.

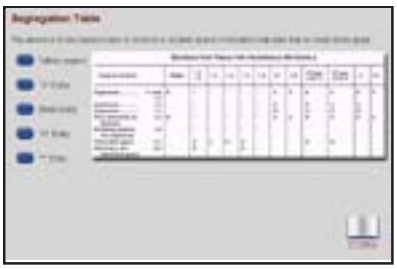
5. For more than one radioactive material package, add the TIs to determine _____ allowable distance.

6. Motor vehicles used for _____ use radioactive material shipments must be checked for contamination after each use.

Correct Answers:

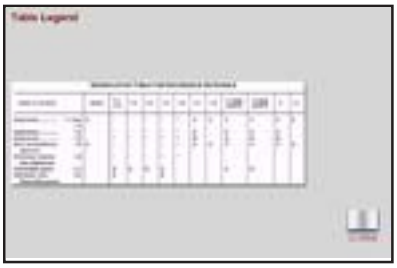
ACROSS	**DOWN**
1. radioactive	1. toxic
2. fifty	2. driver's
	3. only
	4. certain
	5. minimum
	6. exclusive

38

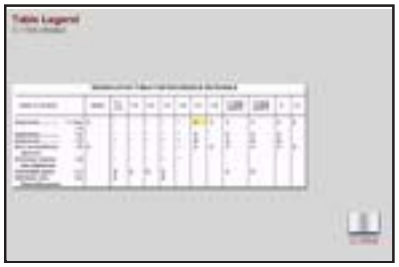


Certain hazardous materials must be separated in a manner that, in the event of leakage from packages, commingling would not occur. The segregation and separation chart of hazardous materials applies to materials in one or more hazard class in packages which require labels, in a compartment within a multi-compartmented cargo tank, or in a portable tank loaded in a transport vehicle or freight container. The "Segregation Table for Hazardous Materials" found in 177.848 shows the segregation requirements for hazard classes and divisions. A hazard class or division that is not shown is not restricted. For example, hazard Class 9 is not restricted. A blank space in the table also indicates that no restrictions apply. Additional instructions for using the table are found in 177.848(e). Click on the buttons to learn more.

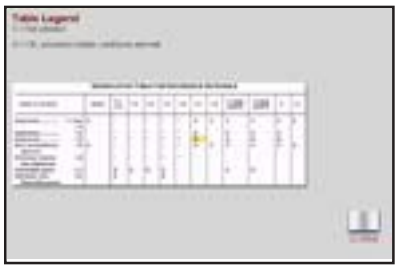
39



Notice the table in 177.848 contains a series of X's and O's.

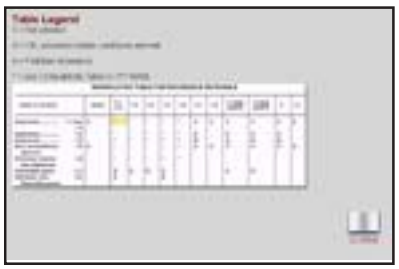


An “X” in the box where a row and a column intersect, means that the two materials may not be loaded, transported, or stowed together in the same transport vehicle or storage facility.



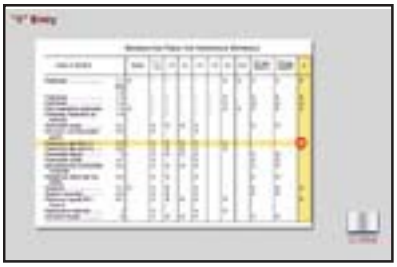
When an “O” appears, the materials may be loaded, transported, and/or stowed together provided certain conditions are met to preclude the commingling of hazardous materials.

An “A” in the second column of the table indicates that, notwithstanding the requirements of the letter “X”, ammonium nitrate and ammonium nitrate fertilizers may be loaded or stored with Division 1.1 (Class A explosive) or Division 1.5 materials.



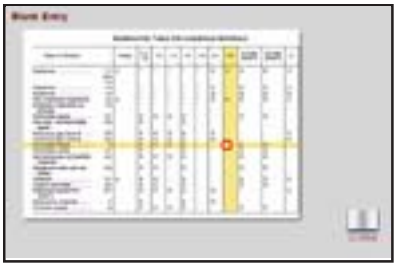
The asterisks in the table indicate that segregation among different Class 1 (explosive) materials is governed by the compatibility table in 177.848(f).

40



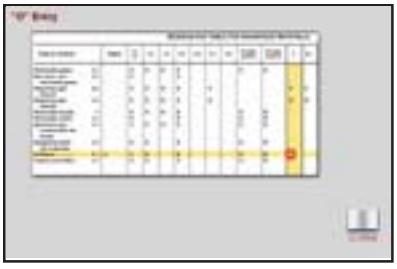
Take your ruler or paper marker and place it across the table under the row "Poisonous gas (Division 2.3), Zone A." Keep your ruler in place and find the Class 3 (flammable liquid) column. Follow that column down the page to its intersection with Division 2.3, Zone A. There is an "X" in the block where Div. 2.3, Zone A row and Class 3 column intersect. Do not load, transport, or stow these materials together.

41



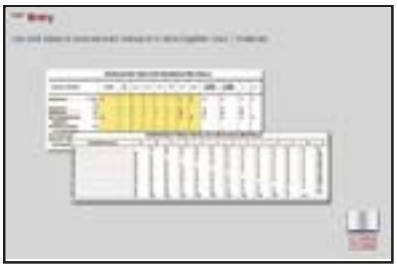
Using the same procedure take your ruler or paper marker and place it across the table under the row "Flammable liquids (Class 3)." Keep your ruler in place and find the Division 2.2 column. Follow that column down the page to its intersection with Flammable liquids (Class 3). The area where these intersect is blank, which means that these two materials may be loaded, transported, and stored together.

42



Now find the row for Division 5.1 (Oxidizers) and the column for Class 3 (flammable liquid). There is an "O" where these intersect. The instructions for using the Table indicate that these materials may not be loaded, transported, or stored together – unless a separation is maintained to prevent commingling of the hazardous material.

43



Notice that the explosives in 177.848 have an asterisk in Columns 1.1 through 1.6. The asterisk indicates that segregation among different Class 1 (explosive) materials is governed by the Compatibility Table shown in the visual. You can review the Compatibility Table for Class 1 materials by viewing 177.848(f) of the HMR.

Quick Review #6

Instructions: Select the correct answer from the choices provided.

In the Segregation Table for Hazardous Materials, an "X" indicates that the hazardous materials cannot be loaded, transported or stored together.

A. True
B. False

Correct Answer: A True

44

In addition to other requirements of the HMR, hazardous materials may be transported on motor vehicles carrying passengers for hire; however, certain conditions and limitations apply to this type of hazardous materials transportation. No hazardous materials, including explosives, are authorized for transportation on motor vehicles carrying passengers for hire where other practicable means of transport is available, except small arms ammunition, emergency shipments of drugs, chemicals and hospital supplies, and accompanying munitions of war. The specific limitations and conditions relating to these shipments can be found in 49 CFR 177.870(b).

Quick Review #7

Instructions: Select the best answer from the four choices provided.

With certain limitations and conditions, hazardous material may be transported on motor vehicles carrying _____ for hire where no other practical means is available.

A. freight
B. passengers
C. livestock
D. vegetables

Correct Answer: B passengers

Carriers Summary

Carriage by Public Highway, Part 177

• Class 7 (radioactive materials)	177.842
• Disabled Vehicles	177.854
• Div. 6.1 (poisonous), Div. 2.3 (poisonous gas) materials	177.841
• Driving and Parking Rules	397.1-19
• FMCSR Compliance	177.804
• Loading and Unloading: General Requirements	177.834
• Loading and Unloading: Specific Requirements	177.835
• Movement of Motor Vehicles in Emergencies	177.823
• Passenger Vehicles	177.870
• Registration	107.601-620
• Routing of Class 7 (Radioactive) Materials	397.101-103
• Segregation and Separation Chart	177.848
• Shipping Papers	177.817
• Training	172.700-704 and 177.816
• Unacceptable Hazardous Material Shipments	177.801
• Vehicular Tunnels	177.810

Student Activity

Carrier Requirements (Highway) Student Activity

Student Activity #1

Directions to Student(s)

The object of the student activity is to provide a practical exercise in determining Hazardous Materials Regulations (HMR) requirements for motor carriers.

Student Activity #1 has 9 questions. Select the correct answer and give the HMR reference supporting your answer.

Self-Evaluation

The student activity will evaluate your skill and facility in determing motor carrier requirements under the HMR. When you have completed and checked your work for accuracy, either review the student activity with the instructor or check the answers on page 29.

Carrier Requirements (Highway) Student Activity

Student Activity #1

Please select the correct answer and provide the supporting HMR section reference.

1. It is the duty of each private, common and contract motor carrier to thoroughly train hazmat employees in the applicable HMR.

   a. True
   b. False

   Section _____

2. No person may accept for transportation or transport by motor carrier any shipment of hazardous material(s) that is not in total compliance with the HMR.

   a. True
   b. False

   Section _____

3. All records, equipment, packaging and containers under the carrier's control, insofar as safety in transportation is concerned, must be made available for inspection by USDOT.

   a. True
   b. False

   Section _____

4. When the driver is at the controls of a motor vehicle containing hazardous materials, the required shipping paper shall be _____ .

   a. within the driver's immediate reach while restrained by a lap belt
   b. either readily visible or in a holder on the inside of the driver's door
   c. in the motor vehicle's glove compartment
   d. a and b

   Section _____

5. When the driver is not at the controls of the motor vehicle containing hazardous materials, the required shipping paper must be in the driver's possession.

   a. True
   b. False

   Section _____

6. Unless in an emergency, a carrier may not move a transport vehicle containing a hazardous material without the required marking and placarding.

   a. True
   b. False

   Section _____

7. Smoking on or about a motor vehicle is prohibited while loading or unloading any Class 3 (flammable liquid), Class 4.1 (flammable solid), Division 5.1 and 5.2 (oxidizers and organic peroxides) or Division 2.1 (flammable gases).

   a. True
   b. False

   Section _____

8. A motor carrier may transport a package bearing a TOXIC or POISON label in the same motor vehicle with dog food, provided the material is overpacked in accordance with 173.25(c).

   a. True
   b. False

   Section _____

9. The Segregation and Separation Chart of Hazardous Materials does not permit the following materials to be loaded, transported and stored together.

   a. Class 3 (flammable liquids) and Class 8 (corrosive) liquids
   b. Div. 5.1 (oxidizers) and Div. 2.3 (poisonous gas, Zone A) materials
   c. Div. 4.1 (flammable solids) and Div. 5.2 (organic peroxides) materials
   d. None of the above

   Section _____

Module 6A Test

1. You may not smoke or carry any lighted material when loading or unloading _____.

A. flammables
B. explosives
C. oxidizers
D. all of the above

2. All records, equipment and packages relating to transportation safety that are under a motor carrier's control must be available for USDOT inspection.

A. True
B. False

3. Motor carriers may transport hazardous materials through urban/public vehicular tunnels used for mass transportation. However, with the exception of radioactive materials, the transportation must be performed in accordance with state and local requirements.

A. True
B. False

4. Foodstuffs should not be carried in the same vehicle as:

A. corrosives
B. flammable gas
C. poisons
D. oxidizers

5. In an emergency, DOT may permit a motor carrier to move an unmarked and/or unplacarded motor vehicle containing hazardous material.

A. True
B. False

6. Shipments of hazardous material must comply with the HMR before anyone may accept them for transport.

A. True
B. False

7. It's the duty of each private, contract and common carrier to thoroughly instruct hazmat employees in the applicable HMR.

A. True
B. False

8. When a driver is at the controls of a motor vehicle containing hazardous material, the required shipping paper must be _____.

A. within the driver's immediate reach while restrained by a lap belt
B. either readily visible or in a holder on the inside of the driver's door
C. in the motor vehicle's glove compartment
D. a and b

9. The Segregation and Separation Chart of Hazardous Materials permits the following materials to be loaded, transported and stored together.

A. Div. 2.2 (Helium, compressed) and Div. 1.5D (Explosive, blasting, type B)
B. Class 6.1 (Iron Pentacarbonyl) and Class 8 (Compound, cleaning liquid)
C. Class 3 (Acetone) and Div. 2.3 (Fluorine, compressed)
D. Class 3 (Gasoline) and Div. 4.3 (Magnesium hydride)

10. Which of the following hazard classes use a transport index?

A. flammable
B. radioactive
C. explosives
D. poison gas

11. Who must certify that a shipment has been prepared according to the HMR?

A. driver
B. carrier
C. consignee
D. shipper

12. The total transport index (TI) of all packages permitted in a single vehicle is:

A. 50
B. 500
C. 25
D. 30

13. A motor vehicle may not transport a package bearing a “TOXIC”, POISON” or “POISON-INHALATION HAZARD” label in the same motor vehicle with a foodstuff or animal feed unless the poisonous material is packaged in accordance with 177.841(e).

A. True
B. False

Carrier Requirements (Highway) Student Activity Answers

Student Activity #1

Question	Answer/Explanation	49 CFR Reference
1.	a.	177.800(c)
2.	a.	177.801
3.	a.	177.802
4.	d. The shipping paper shall be within the driver's immediate reach while restrained by a lap belt; and either readily visible or in a holder on the inside of the driver's door.	177.817(e)(2)(i)
5.	b. When the driver is not at the controls of the motor vehicle, the shipping paper shall be in a holder mounted to the inside of the door on the driver's side of the vehicle; or on the driver's seat in the vehicle.	177.817(e)(2)(ii)
6.	a. The vehicle must be marked and placarded.	177.823(a)(1-3)
7.	a.	177.834(c)
8.	a.	177.841(e)
9.	b. There is an "X" where the columns in the Segregation and Separation Chart intersect for these materials. There is no "X" for the material in a and c.	177.848

Module 6A Test Answers

Question	Answer/Explanation	49 CFR Reference
1.	D. all of the above.	177.834(c)
2.	A. True.	177.802
3.	A. True.	1777.810
4.	C. poisons.	177.841(e)
5.	A. True.	177.823(a)(2)
6.	A. True.	177.801
7.	A. True.	177.800(c)
8.	D. a and b. C is not correct. The shipping paper must be accessible as provided in A and B.	177.817(e)(2)(i)
9.	D. Class 3 (Gasoline) and Div. 4.3 (Magnesium hydride). A, B, and C are not correct. There is an "X" where the row and the column intersect for these materials. Therefore, these materials may not be loaded, transported or stored together.	177.848
10.	B. radioactive.	177.842
11.	D. shipper.	172.204; and 177.817(b)
12.	A. 50.	177.842
13.	B. False. Materials labeled "TOXIC", "POISON-INHALATION HAZARD" are prohibited from being transported together with foodstuff or animal feed.	177.841(e)