

2002 EDITION

INSTRUCTOR

Hazardous Materials Transportation Training Modules

MODULE 6B **Carrier** **Requirements (Air)**



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

Script

Visual

Narrative

1



This module is based on Part 175 and presents the DOT requirements for transporting hazardous materials by air. Topics include quantity limitations, packaging requirements, excepted materials, separation requirements, and notification to the Pilot-in-Command.

2



This module discusses the requirements for offering as a shipper or passenger, accepting, and/or transporting hazardous materials in commerce in any aircraft in the US and in all aircraft registered in the US, anywhere in the world. Click on each button to learn more.



4



As an alternative to preparing shipments in accordance with 49 CFR, Parts 172 and 173, Section 171.11 of 49 CFR allows shipments to be prepared in accordance with the International Civil Aviation Organizations Technical Instructions for the Safe Transport of Dangerous Goods by Air, also known as ICAO Technical Instructions. This facilitates both domestic and international transportation by air; however, Section 171.11 excepts these shipments only from the regulations for packaging, marking, labeling, classifying, and describing materials on shipping papers. All other requirements of Parts 171 through 180 must be met.

5



An air carrier to whom the HMR applies may not transport a hazardous material by aircraft unless each of its hazmat employees involved in that transportation has been trained and tested as required in 175.20 and 172.700-704. Initial training is required within 90 days for new employees or employees who assume new hazmat related responsibilities. DOT requires that hazmat employees be retrained and tested at least once every three years; however, the FAA, under 14 CFR, requires annual training for air carrier employees. Both DOT and FAA require the employer to maintain training records.

6



A person may not perform a hazmat function unless they have been trained in that function or, for a new employee or one who changes job functions; they work under the direct supervision of someone who is trained. If any regulatory requirement pertaining to a function the employee performs changes, the employee must receive training concerning that function immediately.

7



The air carrier relies on the shipper for compliance with the HMR based on the package markings and description on the shipping papers. Air carriers do not open packages or test contents of packages. The air carrier must verify that the shipper has prepared the packages and shipping documents properly. Section 175.30 lists specific items that must be checked before accepting hazardous material packages. Click on the buttons to learn more about the responsibilities of both the shipper and the air carrier.

8



In preparing a hazardous material for transportation by air, the shipper must: classify the hazardous material; determine if the material is regulated as a hazardous material for air transportation, and the quantities that are authorized; properly describe the hazardous material on the shipping documents; determine packaging requirements; package the material accordingly; mark and label the package to communicate the hazard of the material; and determine placarding requirements, if any.

9



If the shipper used an overpack:
 The proper shipping name, ID number, and any special handling markings on the inside packages must be clearly visible or be reproduced on the outside of the overpack. All labels appearing on inside packages must be clearly visible or reproduced on the outside of the overpack. The overpack must display a statement that the inside packages comply with the prescribed specifications, when specific packaging is required. The overpack must not contain a package bearing the CARGO-AIRCRAFT-ONLY label unless the overpack affords clear visibility of and easy access to the package; or the material in the package may be carried in an inaccessible location; or only one package is overpacked.

10



The air carrier must verify that the material, as described on the shipping papers, is authorized and is within the quantity limitations for passenger or cargo aircraft as specified in the HMT. Additionally, the air carrier must verify the content and accuracy of the shipping papers by asking questions such as these:

Is the declaration and shipping description correct?

When required, does the shipping paper contain emergency response information?

Has the shipper certified that the shipment is in proper condition for transport by air?

Finally, are two copies of the Shipper's certification accompanying the shipment? The air carrier must also determine whether the hazardous materials are marked, labeled and, when required, placarded. Package markings must correspond with the proper shipping name and ID number, as required, on the shipping documents. Hazardous materials permitted on cargo aircraft, but not on passenger aircraft, must be labeled with a Cargo Aircraft Only label. Packages must be in good condition for air transportation and the package integrity must not have been compromised, and is not leaking. Finally, check that the seals on radioactive material packages have not been broken.

11



If an air carrier employee finds that the shipper has not prepared the package properly, the air carrier must refuse the package.

Quick Review #1

Instructions: Your task is to complete these statements based on the information presented in this topic. Complete each of the statements by filling in the term that properly completes the statement.

ACROSS

1. The _____ must classify, describe, package, mark, and label the hazardous materials.
2. An air carrier is required to make sure that the material, as described on the shipping papers and package markings, is _____ and is within the quantity limitations for carriage aboard an aircraft as specified in the HMT.
3. All US air carriers and foreign air carriers operating flights to or from US airports must comply with the 49 CFR, Part 175, requirements governing the acceptance, storage, loading, and _____ of hazardous materials by air.
4. Improperly prepared packages must be _____.
5. If an _____ is used, verify that the proper shipping name, ID number, and any special handling markings and labels on the inside packages are clearly visible or that they are reproduced on the outside of the _____. (Same work is used in both blanks.)

DOWN

1. The _____ may not accept hazardous materials unless verification has been made that the shipper has properly prepared the packages and the shipping documents.
2. The air carrier is required to train and test _____ of its hazmat employees.
3. Section 171.11 authorizes the use of the _____ Technical Instructions for preparing hazardous materials shipments intended for transportation by air.

Correct Answers:

ACROSS

1. shipper
2. authorized
3. transportation
4. refused
5. overpack

DOWN

1. air carrier
2. each
3. ICAO

12



Air carriers that transport passengers must display signs warning passengers that the carriage of some hazardous materials aboard aircraft in their luggage or on their person is prohibited by Federal law. The signs must inform passengers of special exceptions that are permitted and penalties for failure to comply with the law. These signs are available from the Research and Special Programs Administration and from the Federal Aviation Administration.

13



At cargo facilities, a similar sign must be displayed informing shippers of the requirements that apply to air shipments of hazardous materials and the penalties for failure to comply with those requirements.

14



Hazardous materials may not be carried in the cabin of a passenger aircraft or on the flight deck of any aircraft, except as authorized in 175.10. The list of exceptions, situations where the HMR do not apply, is quite long. For ease of comprehension, we have grouped the exceptions into five categories. Click on the buttons to learn more about these exceptions.

15



Hazardous Materials required for the safe operation of the aircraft include:
aviation fuel and oil in tanks required to operate the aircraft, and hazardous materials required on board an aircraft to make the aircraft airworthy include: fire extinguishers, oxygen generators, escape chutes, and life rafts.

16



Replacements for such hazardous materials must be in compliance with the HMR. To ship aircraft spares and supplies, the shipper may use packaging specifically designed for these items, if the packaging provides at least an equivalent level of protection to those required by 49 CFR. Aircraft batteries are not subject to the quantity limitations in 172.101 and 175.75(a). A serviceable tire in a tire assembly may not be inflated to a gauge pressure that exceeds the maximum rated pressure for that tire.

17



Hazardous Materials intended for personal use by passengers and crewmembers like: nonradioactive medicinal and toilet articles, including aerosols, may be carried by flight crew and passengers in checked or carry-on baggage. Other aerosols in Division 2.2 with no subsidiary risk, for personal use, may only be carried in checked baggage. The aerosol containers may contain no more than 470 ml or 16 ounces or 2 kg or 1.1 lbs of material. The total capacity of all the containers may not be more than 70 net weight ounces or 68 fluid ounces. Personal smoking materials are allowed, but not lighters with flammable liquid reservoirs and containers with lighter fluid for refilling lighters. Strike anywhere matches are forbidden. Butane curling irons may not include refills, and are limited to one per person.

18



Passengers and crewmembers may carry duty free perfumes, colognes, and alcohol not exceeding 140 Proof, in their carry-on baggage. Dry ice used to cool perishables, may be carried as cargo in both checked and carry-on baggage. Quantities are limited to 2.3 kg or five pounds in cargo and checked baggage, and 2 kg or 4.4 pounds in carry-on baggage. The packaging must permit the release of carbon dioxide gas. For dry ice in checked baggage, the package must be marked with: the name of the contents being cooled; the net quantity of dry ice; and the words Carbon Dioxide, Solid, or Dry Ice.

19



The Research and Special Programs Administration of the U.S. Department of Transportation (RSPA), in coordination with the Federal Aviation Administration, developed the brochure "These Fly...These May Not", to inform airline passengers of the hazardous materials that are not permitted on commercial aircraft in either checked or carry-on luggage. It is available from RSPA for distribution at ticket counters, curbside check-in, and aircraft boarding areas.

20



Hazardous materials intended for use in specialized air operations include: hazardous materials loaded and carried for purposes of aerial seeding, dusting, spraying, fertilizing, crop improvement or pest control; smoke grenades and flares used in sport parachuting; pyrotechnics used in air shows; and hazardous materials expended during flight for weather control, environmental restoration and protection.

21



Hazardous Materials that must be carried to meet the medical needs of passengers or crewmembers include: oxygen, or any hazardous material used to generate oxygen, for the medical use by a passenger, which is furnished by the air carrier; implanted medical devices, such as a heart pacemaker; wheelchairs and other mobility devices may be accepted as checked baggage when the battery is disconnected and the terminals are insulated, or the battery is securely attached to the wheelchair, or the battery is removed, properly marked and packed in a strong rigid packaging. Click on each button to learn more about the different requirements for spillable and nonspillable batteries.



Nonspillable batteries are excepted from the Hazardous Materials Regulations, but the battery must be protected against short circuits and securely packaged. For batteries manufactured after September 30, 1995, the battery and the outer packaging must be marked **NONSPILLABLE** or **NONSPILLABLE BATTERY**; and the battery must be capable of passing the vibration and pressure differential test.



Spillable batteries must be packed in leak proof packaging with enough absorbent material to absorb all of the battery contents. Additionally, the package must be labeled Corrosive and marked "Battery, wet, with wheelchair", and the Pilot in Command must be notified.

22



The last group, miscellaneous hazardous materials exceptions, includes: carbon dioxide (solid), or dry ice, used for food and beverage service aboard the aircraft; alcohol, perfumes and colognes carried for sale on the aircraft; small medical thermometers; and weather agency barometers.

Quick Review #2

Instructions: Select the term that correctly completes each statement.

Terms:

- | | | | |
|-----------------|---------------|-------------|----------------|
| A. excepted | B. prohibited | C. separate | D. authorized |
| E. radios | F. medicines | G. routine | H. specialized |
| I. disconnected | J. removed | K. HMT | L. HMR |

Statements:

1. Air carriers that transport passengers must display signs warning passengers that the carriage of some hazardous materials aboard aircraft in their luggage or on their person is _____ by Federal law. At cargo facilities, a similar sign must be displayed.
2. Hazardous materials that are required to make the aircraft airworthy, such as aircraft batteries, escape chutes and fire extinguishers, are _____ from the HMR, but replacements for these hazardous materials are subject to the regulations.
3. Small quantities of certain personal toilet articles, smoking materials, _____, and dry ice are excepted from the HMR and may be hand carried on board an aircraft by passengers and crewmembers in their carry on baggage.
4. Hazardous materials used in _____ air operations, such as crop dusting, sport parachuting, and weather control, are generally not subject to the HMR.
5. Wheelchairs with either spillable or nonspillable batteries may be accepted as checked baggage. All batteries must be _____ and the terminals insulated.
6. Dry ice used by the air carrier for in-flight food and beverage service is not subject to the _____.

Correct Answers:

1. prohibited
2. excepted
3. medicines
4. specialized
5. disconnected
6. HMR

23



It is important that all parties involved in the handling of hazardous materials use a common set of terms and definitions. Shown here are the accepted definitions for four of those terms. The term passenger aircraft and cargo aircraft will be used throughout the remainder of this module. Passenger Aircraft or passenger carrying aircraft is an aircraft that carries any person other than a crewmember, company employee, an authorized representative of the United States, or a person accompanying a shipment. Cargo Aircraft or cargo carrying aircraft is an aircraft that is used to transport cargo and is not engaged in carrying passengers. The terms cargo aircraft, cargo-only aircraft, and cargo aircraft only, have the same meaning in this module. Forbidden means the hazardous material may not be offered for transportation or transported; some materials are forbidden on passenger aircraft only; some are forbidden on all aircraft. Forbidden does not mean the material is not regulated. Magnetic Field, as it applies to carriage by aircraft, means a package with a magnetic field of more than 0.00525 gauss measured 4.5 meters or 15 feet away from any surface of the package. Such packages are forbidden to be carried on an aircraft.

Quick Review #3

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

FORBIDDEN means that the material may not be transported. Some materials are only forbidden on _____ aircraft. Some are forbidden on all aircraft.

- A. charter
- B. passenger
- C. cargo
- D. private

Correct Answer: B passenger

24

Material	Passenger Aircraft	Cargo Aircraft
Class 1 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 2 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 3 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 4 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 5 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 6 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 7 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 8 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)
Class 9 (all materials)	1000 lbs (450 kg)	1000 lbs (450 kg)

Column 9 of the Hazardous Materials Table entitled, “Quantity Limitations”, forbids or limits the quantity of hazardous materials in one package that may be offered or transported by aircraft. Unless otherwise specified, the quantity limits are net quantity limits. That is, the total weight of the hazardous material, not including the tare weight of the package.

Quick Review #4

Instructions: Select the correct answer from the choices provided.

Column 9 of the HMT forbids or limits the quantity of hazardous materials in one package that may be offered or transported on passenger aircraft or cargo only aircraft.

- A. True
- B. False

Correct Answer: A True

25



Unless otherwise noted, each packaging used for the shipment of hazardous materials must be designed, constructed, and maintained to prevent the release of the hazardous materials. Proper packaging is critical to the safe transportation of hazardous materials, especially in air transportation where the hazardous materials are subjected to changes in temperature, altitude, and pressure. Click on each button to learn more about these specific requirements.

26



Packages containing Class 4, 5, and 8 materials must meet the performance tests at the Packing Group II level, even if Column 5 of the HMT shows that the materials are in Packing Group III.

27



Packagings must be designed and constructed to prevent leakage that may be caused by internal pressure changes in altitude and temperature during air transportation.

28



Packagings for which retention of liquid is a basic function must be capable of withstanding without leakage the greater of either an internal pressure which produces a gauge pressure of not less than 75 kPa or 11 psi for liquids in Packing Group III of Class 3 or Division 6.1 or 95 kPa or 14 psi for other liquids; or the pressure related to the vapor pressure of the liquid to be conveyed.

29

Hazardous materials, packed in combination packaging, may be enclosed in an inner container which does not meet the pressure requirements provided it is packed inside a supplementary packaging that meets the pressure requirements.

30

Unless otherwise noted, venting packages to reduce internal pressure is not permitted when packages are being transported by air.

31

Packages must be securely closed. Friction type closures, such as stoppers and corks must be held securely in place by positive means. Screw type closures must be secured to prevent loosening from vibration or substantial changes in temperature or pressure.

32



Combination packages of liquids in Packing Group I and II of Class 3, 4, 5, 6 and 8 require absorbent materials when the inner container is made of glass or earthenware. The absorbent material must be such that it does not react dangerously with the liquid.

33



Absorbent material is not required for inner packagings which are so protected that they will not likely break and leak under normal conditions of transportation, and leakage from the outer packaging is not likely to occur, and for packagings containing liquids in Packing Group II intended for Cargo Aircraft Only.

34



When absorbent material is required and the outer packaging is not liquid tight, some additional means of containing the liquid in the event of leakage must be used. This may be in the form of a leak proof liner, plastic bag or other equally efficient means of containment.

35



When a liquid hazardous material in Packing Group I is being transported on a passenger aircraft and the regulations require absorbent material, there must be sufficient material to absorb the contents of all inner packagings containing such liquids.

36



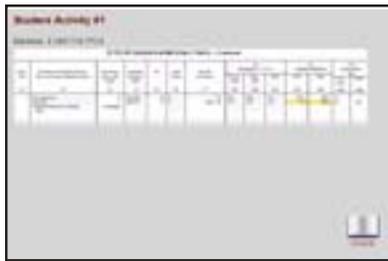
For Packing Group I liquids being offered for transportation on a Cargo Aircraft Only and Packing Group II liquids offered for passenger aircraft, there must be enough absorbent material in the package to absorb the content of any one of the inner containers. If the inner containers are different sizes, there must be enough material to absorb the content of the container with the greatest quantity of liquid.

37

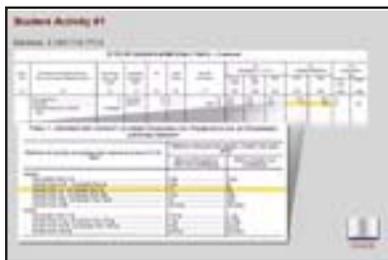


When combination packagings are being offered for air transport, the inner packaging must conform to the quantity limits set forth in 173.27(f), Tables 1 and 2. Table 1 indicates quantities permitted in inner containers for passenger aircraft, and Table 2 indicates quantities permitted in inner containers for cargo aircraft. Take some time now to familiarize yourself with 49 CFR 173.27(f), Tables 1 and 2.

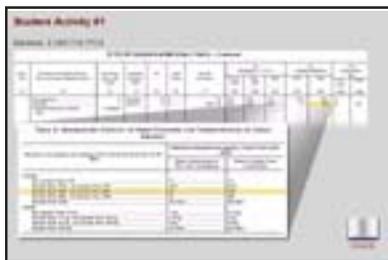
38



To illustrate the use of Tables 1 and 2, find Benzene in the HMT and note the allowed quantities in Columns 9A and 9B. Benzene, 3, UN 1114, PG II is a flammable liquid; Column 9A of the HMT allows a maximum net quantity of 5 liters per package.



Looking at Table 1, if Column 9A sets the maximum net quantity for a liquid material at 5 liters, the regulations permit a maximum of 1 liter in a glass, earthenware or fiber inner container, and 5 liters in a metal or plastic inner container. Column 9B allows a maximum of 60 liters on cargo aircraft.



Using Table 2, we see that we may have no more than 5 liters in a glass, earthenware, or fiber inner container; however, we may have 10 liters in a metal or plastic inner container.

39



Cylinder valves must be protected against damage and accidental opening when shipped by air. Valve caps must be securely attached or cylinders must be placed in a box or crate.

40

Tank cars and cargo tanks containing hazardous materials may not be transported aboard aircraft.

41

Hazardous materials shipped by air and authorized for cargo aircraft only must have the **CARGO AIRCRAFT ONLY** label affixed to the package. The label warns those who handle the shipment that it may not be offered or transported on a passenger aircraft.

Quick Review #5

Instructions: Your task is to complete these statements based on the information presented in this topic. Complete each of the statements by filling in the term that properly completes the statement.

ACROSS

1. When _____ packagings are being offered for air transport, the inner packaging must conform to the quantity limits set forth in 173.27(f), Tables 1 and 2.
2. When absorbent material is required, the material must be such that it would not react dangerously with the spilled material. If absorbent material is required and the outer packaging is not liquid tight, some other means of _____ the spilled material is required.
3. CARGO AIRCRAFT ONLY label packages are prohibited from being offered or transported on _____ aircraft.

DOWN

1. Cylinder valves must be protected when shipped by air. Equip cylinders with valve _____ or protective headrings or put cylinders in a box or crate.
2. Hazardous materials packaging must be designed and constructed to prevent leakage caused by _____ and temperature changes during air transportation.
3. No _____ tanks, tank cars, or packages with vented closures may be transported aboard an aircraft.
4. Supplementary packaging that meets the pressure requirements must be used in combination packaging if the _____ container does not meet the pressure requirements. Package closures must be held securely in place to prevent leakage.

Correct Answers:

ACROSS

1. combination
2. containing
3. passenger

DOWN

1. caps
2. altitude
3. cargo
4. inner

42



What quantity of hazardous material may be carried aboard an aircraft?

Not more than 25 kg or 55 pounds net weight of hazardous material, and in addition, 75 kg or 165 pounds net weight of Division 2.2 (non-flammable compressed gas) may be carried on a passenger aircraft in an inaccessible cargo compartment, or in a freight container within an accessible cargo compartment. On a cargo aircraft, those same quantity limits apply to inaccessible cargo compartments and to accessible cargo compartments when the materials are not loaded in a freight container and are loaded in the cargo compartment in a manner that makes them inaccessible.

43



Radioactive materials are limited to 3.0 Transport Index (TI) per package or a total of 50.0 TI per passenger aircraft. The limits are 10.0 TI per package, with a maximum of 200.00 TI per cargo aircraft. Radioactive materials labeled RADIOACTIVE WHITE I are not subject to the TI limitations.

44



There are no quantity limits for Class 9 (Miscellaneous) materials or ORM-D on either passenger or cargo aircraft.

45



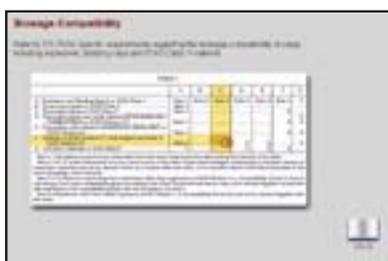
Hazmat packages with text or arrows to indicate the proper orientation of the package must be stored and loaded in accordance with the markings.

46



Packages must be secured in an aircraft so that movement of the package in flight is prevented.

47



Incompatible hazardous materials may not be placed next to each other or in a position that might lead to a dangerous interaction in the event of leakage. Look at the Stowage Compatibility Table located in 175.78, Table 1. The letters across the top of the table have the same meaning as the letters along the left hand side of the table. An “X” at the intersection of a row and a column means that these materials may react dangerously with each other and may not be placed next to or in contact with each other in storage or on board the aircraft. Refer to 175.78 for specific requirements regarding the stowage compatibility of cargo including explosives, blasting caps and ICAO Class 1 material.

48



No person may load magnetized materials in the vicinity of a magnetic compass or compass master unit that is a part of the instrument equipment of the aircraft in a manner that affects its operation. The magnetized materials might cause an erroneous magnetic compass reading on the aircraft. If this requirement cannot be met, a special aircraft swing and compass calibration may be made.

49



On a passenger aircraft, hazardous materials may be carried in a main deck cargo compartment provided that the compartment is inaccessible to passengers and that it meets all certification requirements for a Class B aircraft cargo compartment.

50



Hazardous materials acceptable only for cargo aircraft must be loaded in such a manner that a crew member or other authorized person can see, handle, and when size and weight permit, separate such packages from other cargo during flight.

51



When packages in the hazardous classes or divisions shown here are carried on cargo aircraft, they may be carried in a location which is inaccessible to a crewmember during flight and are not subject to the weight limitation specified in 175.75(a)(2):

52



When packages of hazardous materials acceptable for cargo or passenger aircraft are carried on cargo aircraft, only where other means of transportation are impracticable or not available, packages may be carried in accordance with procedures approved in writing by the FAA Air Transportation Security Field Office responsible for the operator's overall aviation security program or the FAA Air Transportation Security Division, in the region where the operator is located.

53



When packages of hazardous materials acceptable for cargo or passenger aircraft are carried on small, single pilot, cargo aircraft only because other means of transportation are impracticable or not available, they may be carried without regard to quantity limitations as specified in 175.75 in a location that is not accessible to the pilot if the conditions shown here are met:

Quick Review #6

Instructions: Select the term that correctly completes each statement.

Terms:

- | | | | |
|-----------------------|-----------------|----------------|----------------------|
| A. unlimited | B. passengers | C. 10.0 | D. stored and loaded |
| E. marked and labeled | F. crew member | G. orientation | H. limited |
| I. content | J. inaccessible | K. 3.0 | L. accessible |

Statements:

1. Hazardous materials may be transported in an _____ cargo compartment or in a freight container within an accessible cargo compartment on passenger aircraft, if within specified weight limitations.
2. Up to _____ TI per package of Radioactive Materials, but not more than 50.0 TI may be transported on a passenger aircraft.
3. _____ quantities of Class 9 or ORM-D materials may be transported on either passenger or cargo aircraft.
4. Arrows on packages indicate the _____ of the package. Packages containing hazardous materials must be prevented from movement in flight.
5. Materials that react dangerously with each other may not be _____ next to each other.
6. Materials in Classes 3 (PG III), 7, 9, Division 6.1 and 6.2, and ORM-D may be carried on a cargo aircraft in a compartment that is inaccessible to _____. These materials are not subject to the weight limitations in 175.75(a)(2).

Correct Answers:

1. J inaccessible
2. K 3.0
3. A unlimited
4. G orientation
5. D stored and loaded
6. F crewmembers

54



Before an aircraft departs, the pilot-in-command must be given written notification describing all hazardous materials that have been loaded. This does not apply to the exceptions listed in 175.10. There is no standard format required for use by air carriers for pilot notification. The notification to pilot-in-command must be readily available to the pilot during flight as it contains information that would be critical in the case of a spill or other emergency.

55



In addition to acceptance requirements, 49 CFR, Part 175, Subpart A, contains requirements for reporting hazardous materials discrepancies. Discrepancies are situations where hazardous materials are improperly described, certified, labeled, marked, or packaged in a manner which is not known at the time the air carrier accepts the shipment. If a discrepancy is discovered after the shipment has been accepted, the air carrier must notify the nearest FAA Civil Aviation Security Office. Click on the Discrepancies List button to view a list of Hazardous Material Discrepancies that are required to be reported to the nearest FAA Civil Aviation Security Office if discovered.

Quick Review #7

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

A discrepancy is a situation in which a hazardous material is improperly described, certified, labeled, marked, or packaged in a manner which is not known when _____ by the air carrier. If a discrepancy is discovered after acceptance by the carrier, the air carrier must notify the nearest FAA Civil Aviation Security Office.

- A. accepted
- B. transported
- C. packaged
- D. documented

Correct Answer: A accepted

56



Despite all safety efforts, incidents do occur. When hazardous materials are involved in a transportation incident, a report may be required. Reporting requirements are the responsibility of the carrier. Click on each button to learn more about incident reporting.

57



Section 171.15 provides guidelines for incidents that require immediate notification. The immediate notification must be followed by a detailed written report to the US DOT as outlined in 171.16. Hazmat incidents that result in any of the following require notification as soon as possible to the nearest FAA Civil Aviation Security Office or the Center for Disease Control, if applicable, when due to the hazardous materials: death or injury requiring hospitalization, damage greater than \$50,000, change in the operational flight pattern or routine of an aircraft, the shutdown of a major facility or transportation artery for more than one hour, or an evacuation of the general public that lasts more than one hour. The telephone report must be followed by a written report within 30 days.

58



A written report is also required for any incident involving the release of hazardous materials, regardless of the seriousness of the incident. Review the reporting requirements for the release of hazardous materials found in 171.15 and 171.16.

59



If an incident involves breakage, spillage, or suspected radioactive contamination from Class 7 (radioactive) materials shipments, the carrier shall also notify the shipper at the earliest practicable moment.

Quick Review #8

Instruction: Select the correct answer from the choices provided.

When hazardous materials are involved in a transportation incident, a report may be required. Reporting requirements are the responsibility of the shipper.

- A. True
- B. False

Correct Answer: B False

Module 6B Test

1. A shipper is offering a package containing 20 lbs. of Calcium nitrate for transportation by air. What is the maximum net quantity per package allowed on a passenger aircraft?
 - A. 100 kg.
 - B. 25 lbs.
 - C. 25 kg.
 - D. 75 lbs.

2. How many copies of the Shippers certification must accompany the shipment?
 - A. three
 - B. one
 - C. four
 - D. two

3. Orientation arrows indicate the proper orientation of packages for _____ and storing.
 - A. loading
 - B. filling
 - C. marking
 - D. labeling

4. Identify the item of information not required on the notice to the pilot in command.
 - A. description of the hazardous materials
 - B. name of the shipper
 - C. location of the hazardous materials loaded on the aircraft
 - D. total number of packages

5. Hazardous materials being transported as company replacement items must be marked, labeled, and documented in the same manner as a commercial air freight shipment, unless otherwise provided.
 - A. True
 - B. False

6. Identify the label(s) required for the shipment of a package containing 75 kg. of Calcium nitrate for transportation on a cargo aircraft.

- A. 5.1
- B. 5.1 and Cargo Aircraft Only
- C. 8
- D. 5.1 and 4.3

7. Identify the label(s) required for 20 lbs. of Calcium nitrate to be transported on a passenger aircraft.

- A. 5.1
- B. 6.1
- C. 1.1
- D. 2.1

8. A shipper is offering a package containing 75 kg. of Calcium nitrate for transportation on a cargo aircraft. What is the maximum allowable net quantity per package?

- A. 25 kg.
- B. 100 kg.
- C. 100 lbs.
- D. 25 lbs.

9. The air carrier must verify that the shipper has properly prepared the packages as well as the shipping papers.

- A. True
- B. False

10. Packages labeled Flammable Liquid and packages labeled Oxidizer may be stored and loaded next to each other.

- A. True
- B. False

11. All hazardous material shipments, unless excepted in 175.10, require the aircraft operator to complete a Notification to the Pilot-in-Command.

- A. True
- B. False

12. The air carrier must verify the markings on the package of Calcium nitrate. Identify the marking that is not required on a package.

- A. consignee or consignor
- B. hazard class
- C. proper shipping name
- D. ID number

Module 6B Test Answers

Question	Answer/Explanation	49 CFR Reference
1.	C. 25 kg.	172.101
2.	D. two.	172.204(c)(2)
3.	A. loading.	175.79(a)
4.	B. name of the shipper.	175.33
5.	A. True.	175.10(a)
6.	B. 5.1 and Cargo Aircraft Only.	172.101
7.	A. 5.1.	172.101
8.	B. 100 kg.	172.101
9.	A. True.	175.30(a-b)
10.	B. False.	175.78(a)
11.	A. True.	175.33(a)
12.	B. hazard class.	175.30(a)(3)