



Hazardous Materials Manual

Manual Number 330

FAA APPROVAL

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Principal Operations Inspector, Phoenix CMO, WP37

Revision 15

12/15/23

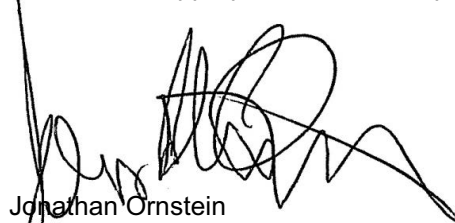
Mesa Airlines, Inc. Safety Policy Statement

The Accountable Executive of Mesa Airlines, Inc. recognizes that an effective Safety Management System (SMS) is vital to the success and longevity of the Company. Therefore the Accountable Executive is committed to implementing and maintaining a fully functional SMS and to the continuous improvement of the level of safety throughout Mesa Airlines, Inc.

- The Accountable Executive of Mesa Airlines, Inc. is committed to establishing and fulfilling specific safety-related objectives and will publish and distribute to all employees those objectives and plans annually.
- These safety objectives will be monitored, measured, and tracked to ensure overall corporate safety objectives are met. All employees and individuals in the Company have the responsibility to perform their duties and activities in the safest practical manner.
- The Mesa Airlines, Inc. Accountable Executive is committed to providing the necessary financial, personnel, and other resources to implement and maintain a fully functional SMS.
- The Mesa Airlines, Inc. Accountable Executive is dedicated to establishing a confidential employee reporting system to report all hazards, accidents, incidents, and safety issues without fear of reprisal.
- Activities involving intentional disregard for FAA regulations, Company policies and procedures, illegal activities, and/or drugs or alcohol may be subject to disciplinary action.
- As a component of the SMS, the Mesa Airlines, Inc. Accountable Executive is committed to establishing, maintaining, and annually exercising an emergency response procedure and plan that provides for the safe transition from normal to emergency operations.
- The Safety Policy in its entirety can be found within the Mesa Airlines, Inc. *Safety Management System Manual* (Manual #550).

The Accountable Executive will convey this expectation to all employees through postings, intranet site, Company newsletter, and any other means to ensure all employees are aware of the Company's SMS, their duties and responsibilities, and our safety policy.

This safety policy will be reviewed annually by the Accountable Executive to ensure it remains relevant and appropriate to the Company.



Jonathan Ornstein
Accountable Executive
CEO, Mesa Airlines, Inc.



Summary of Changes

Changes included with this revision are listed in the table below:

Page	Description
1.3	Changed: “Manager of Cargo Operations” to “Manager, Airport Operations & Safety Assurance”
1.3	Updated: Content
1.3	Changed: “Manager of Cargo Operations” to “Director of Cargo Operations”
1.6	Changed: “Manager of Cargo Operations” to “Director of Cargo Operations”

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Chapter 1: Administration

1.1 Scope

- A. This manual contains the policies and procedures regarding Hazardous Materials within the Mesa Airlines, Inc. operation. The contents of this manual are written to be in accordance with applicable regulations found within 49 CFR 171-180, also referred to as the Hazardous Materials Regulations (HMR), and other relevant industry standards and regulations, as described herein.
- B. Mesa Airlines, Inc. is authorized by Operations Specification (OpSpec) A055 and considered by the Federal Aviation Administration (FAA) as a “will carry” air carrier, meaning that Mesa Airlines, Inc. is certified to transport hazardous materials in accordance with the approved Hazardous Materials Program, located herein.
- C. No employee, agent, vendor, or contractor working on behalf of Mesa Airlines, Inc. or its Business Partners, shall prepare hazardous materials for shipment, including COMAT, unless specifically trained in this function and authorized to do so.
- D. No person working for, or on behalf of, Mesa Airlines, Inc. shall accept regulated materials for transport without completing the training requirements outlined in 14 CFR Part 121, Subpart Z and Appendix O Table 1 (or appropriate IATA Category 6 or 12 if accepting/screening shipments in compliance with the IATA DGR), as described in detail in the Training chapter of this manual. ([Refer to Chapter 3: "Training"](#))
- E. COMAT (company material) shipments containing hazardous materials are forbidden on Mesa Airlines, Inc. aircraft unless the items are excepted and transported in accordance with the HMR under 49 CFR 175.8, and as described further in this manual.
- F. Hazardous Materials, other than those permitted by the policies within this manual, shall not be carried onboard any Mesa Airlines, Inc. aircraft. Hazardous Materials that are permitted for transport on Mesa Airlines, Inc. aircraft depend on codeshare operation and aircraft fleet type.
 - 1. For permitted Hazardous Materials and associated requirements on passenger-carrying flights, [refer to Chapter 6: "Passenger Only Carriage"](#).
 - 2. [Refer to Chapter 7: "Cargo Only Carriage"](#) for the procedures and further requirements on cargo only aircraft.
- G. No person employed by, or acting as a representative of, Mesa Airlines, Inc. may accept for transport any hazardous material which is: not permitted by this manual; is in quantities exceeding the maximum allowed by this manual; or not packaged and prepared in accordance with the procedures within this manual.
- H. This manual is one of a series of Mesa Airlines, Inc. operations manuals. For information regarding proper ramp and cargo handling, fueling, deice and other ground service functions, refer to the Mesa Airlines, Inc. *General Operations Manual* (Manual #410) for a reference to the various ground operations manuals Mesa Airlines, Inc. uses and for which operation they apply to.

- I. The Principal Operations Inspector (POI) is the first point of contact with the FAA when requesting to approval to revise this manual or associated training programs. The Principal Hazardous Materials Inspector (PHI) works with the POI and provides recommendations for the final approval or rejection of the hazardous materials program elements.
- J. In accordance with the policies and procedures found in the Mesa Airlines, Inc. *General Procedures Manual* (Manual #210), the maintenance quality assurance department will ensure that each repair station performing work for, or on behalf of, Mesa Airlines, Inc. is notified in writing of the policies and operation specifications authorizing, permitting or prohibiting against the acceptance, rejection, handling, storage incidental to transport and transportation of hazardous materials, including company material. This notification requirement only applies to repair stations that are regulated by 49 CFR parts 171 through 180 (14 CFR 121.1005(e)).
- K. Controls are incorporated throughout the manual with processes and procedures to make sure:
 1. Adherence to polices, procedures, design, and manuals.
 2. Personnel meet the requirements (e.g., trained and qualified)
 3. Inputs for this program meet the requirements (e.g., equipment, services, and information)
 4. Outputs meet the requirements and standards, etc.
 5. Hand-offs and interfaces do not create problem

NOTE

[Refer to "Hazardous Materials Program Oversight"](#), [refer to "Training Validation"](#), or [refer to "Validation"](#) and [refer to Chapter 7: "Cargo Only Carriage"](#) for more information on the controls to ensure compliance with the contents of this manual.

1.2 Administration

1.2.1 Governance

- A. This manual shall comply with federal Hazardous Materials Regulations (HMR) for the transportation of hazardous materials by air found in the Code of Federal Regulations (CFR) Title 49, "Transportation", Parts 171-180. In addition, this manual shall comply with the requirements set forth in 14 CFR 121.135(b)(25). Access to this document can be obtained via the Internet at <https://www.ecfr.gov/cgi-bin/ECFR?page=browse>.

NOTE

This webpage is the entry point into a government maintained site providing access to all Code of Federal Regulations. Subsequent links must be followed in order to retrieve specific titles.

- B. This manual is written to ensure compliance with the HMR, however persons offering shipments containing hazardous materials may offer domestic shipments (origin and final destination both within the United States) in compliance with 49 CFR or the IATA Dangerous Goods Regulations. International shipments containing hazardous materials may be offered in compliance with the IATA DGR.

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- C. It is the responsibility of the shipper to select which regulations to comply with and to do so in the requirement's entirety, as outlined above. Shipments containing hazardous materials offered under IATA regulations covering such shipments must comply with the provisions of 49 CFR 171.22.

1.2.2 Authority and Responsibility

- A. The Mesa Airlines, Inc. Senior Vice President of Flight Operations (Director of Operations) is responsible for this manual and the quality of the hazardous materials program described herein. The Senior Vice President of Flight Operations (Director of Operations) has the authority to establish or modify the policies and procedures of the program, and may delegate this authority to other qualified individuals but retains overall responsibility of the program.
- B. The Manager, Airport Operations & Safety Assurance is delegated the authority for the development of this manual and subsequent program, but the Senior Vice President of Flight Operations (Director of Operations) retains overall responsibility.
- C. The Manager of Airport Operations & Safety Assurance will coordinate with the Director of Cargo Operations and the Senior Vice President of Flight Operations (Director of Operations) for revisions and program updates.
- D. The duties, responsibilities and qualifications of the Senior Vice President of Flight Operations (Director of Operations), the Director of Cargo Operations and the Manager of Airport Operations & Safety Assurance are described in the Mesa Airlines, Inc. *Personnel Manual* (Manual #810).
- E. The duties and responsibilities for ground handling personnel are described within the appropriate codeshare manual. [Refer to "Codeshare Partner Manuals"](#) for further information.

1.2.3 Manual Availability and Use

- A. As required by 14 CFR 121.135(c) and 121.137(a)(1-3), the most current revision of this manual must be accessible to station personnel at all stations that Mesa Airlines, Inc. operates flights to, either in paper or electronic format. This includes any location where hazardous materials permitted for transport by this manual may be offered, accepted, handled, loaded, or temporarily stored for the purpose of being transported aboard an aircraft operated by Mesa Airlines, Inc. Mesa Airlines, Inc. Technical Publications Department is responsible for ensuring the appropriate distribution of any updated revisions to this manual.

The most current revision of this manual is available on Mesa Airlines, Inc. TechPubs page at: <http://mesanet.mesa-air.com/TechPubs/Mesa.aspx>.

- B. Should any part of this manual be removed, electronically reproduced or be rendered, in any capacity, uncontrolled, such reproductions will be marked with the text "Uncontrolled copy when downloaded or printed from an electronic document." or similar to indicate it is uncontrolled.

1.2.4 IATA Dangerous Goods Regulations (DGR)

- A. The IATA Dangerous Goods Regulations contain all of the requirements of the ICAO Technical Instructions. IATA has included additional requirements, which are more restrictive than the Technical Instructions and reflect airline industry standard practices or operational considerations.
- B. At all locations where Mesa Airlines, Inc. personnel, or those contracted on behalf of Mesa Airlines, Inc., accept, handle, load, transport or store hazardous materials for the purpose of its transportation, are required to have the current year edition of the IATA DGR accessible to them during all hours of operation. Local vendor management must ensure access is provided. This will be verified in regular vendor oversight audits.
- C. Mesa Airlines, Inc. System Operations Control (SOC) will maintain a current copy of the IATA DGR, accessible to dispatch personnel during all hours of SOC operation.

1.2.5 Codeshare Partner Manuals

- A. For Mesa Airlines, Inc. passenger codeshare operations, the policies and procedures for cargo shipments containing hazardous materials are specific to each codeshare partner. For United Express, the Regional Ground Operations Manual (RGOM), contain specific procedures for the limited quantities of hazardous materials authorized for transport on Mesa Airlines, Inc. passenger fleet aircraft in accordance with this manual. All policies and procedures contained within the RGOM are reviewed and approved by the Manager of Airport Operations & Safety Assurance and the contents therein meet or exceed the requirements of this manual. Revision and approval processes are described within each publication.
 - 1. For vendor personnel:
 - a. Access to the RGOM is available via: flyingtogether.ual.com using your United vendor login credentials.
 - 2. Both publications are available to Mesa Airlines, Inc. personnel via the secured TechPubs page: <http://mesanet.mesa-air.com/TechPubs/> using your Mesa employee credentials.
- B. For Mesa Airlines, Inc. cargo only operations, the policies and procedures for cargo shipments containing hazardous materials are specific to each business partner. For DHL Express, the policies and procedures are located within the Global SOP Aviation Manual (GSAM or GSOP). All revisions to the policies and procedures contained therein are reviewed and approved by Manager of Cargo Operations and meet or exceed the requirements of this manual.
 - 1. The GSAM may be accessed online via: <https://gaps.dhl.com/app>
- C. All policies and procedures of business partners related to hazardous materials are reviewed for interface with this manual. All restrictions on hazardous materials permitted for carriage on Mesa Airlines, Inc. aircraft interface with the codeshare publications referenced above as meeting or exceeding the requirements of this manual.

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1.2.6 Manual Revisions/Modifications/Amendments

- A. Revisions, modifications or amendments to this manual will be submitted in writing to the Senior Vice President of Flight Operations (FAA Director of Operations), or designee.
- B. All revisions, modifications or amendments to this manual will be submitted in accordance with the processes and procedures outlined in the Mesa Airlines, Inc. *Technical Publications Procedures Manual* (Manual #430) and approved by the FAA prior to becoming effective.
- C. Interfaces with other manuals in the Mesa Airlines, Inc. manual system, including publications for Maintenance, Flight Operations, Dispatch and Inflight, are identified in the Mesa Airlines, Inc. *Technical Publications Procedures Manual* (Manual #430).

1.2.7 Hazardous Materials Program Oversight

- A. Significant changes to the Hazardous Materials Regulations (HMR) found in 49 CFR, relevant sections of 14 CFR 121 or the IATA DGR will warrant a review of this manual and program to determine the impact of those changes. This review will be made by the Senior Vice President of Flight Operations (Director of Operations), or designee, in conjunction with applicable department representatives.
- B. Additionally, this manual will be reviewed on an annual basis for quality assurance purposes by the Senior Vice President of Flight Operations (Director of Operations), or designee, in conjunction with other appropriate or applicable department heads, as described within Chapter 1 of the *Technical Publications Procedures Manual* (Manual #430).
- C. During all reviews of this manual and the hazardous materials program contained herein, the Senior Vice President of Flight Operations, or designee, will follow the change management procedures found within the Mesa Airlines, Inc. *Safety Management System Manual* (Manual #550) and the *Technical Publications Procedures Manual* (Manual #430) for revising Mesa Airlines, Inc. publications when it is determined an update to the program is required.
- D. When a revision to this manual is approved for dissemination, Mesa Airlines, Inc. personnel will be alerted via the procedures found within the *Technical Publications Procedures Manual* (Manual #430). All affected vendor ground and operations personnel will be alerted to change via bulletins, or other formal communication, via the codeshare partner's normal process.
- E. The Senior Vice President of Flight Operations (Director of Operations), or designee, will ensure that an audit of hazardous materials policies and procedures occurs at each station in accordance with the Mesa Airlines, Inc. *Station Compliance Handbook*. This audit may be completed as part of another audit with a broader scope.
- F. The Internal Evaluation Program (IEP) conducts periodic evaluations on the Hazardous Materials Program. Refer to the *Safety Program Manual* (Manual #530) for further information on the IEP.

1.2.8 Contact Information

- A. All personnel are directed to report any and all instances of non-compliance with this program on behalf of Mesa Airlines, Inc. operated service. As part of the Mesa Airlines, Inc. Safety Management System (SMS) process, all safety and or security concerns must be reported to the Mesa Airlines, Inc. Safety Department and the Vice President of Safety and Security at mesasafety@mesa-air.com or CargoOps@mesa-air.com. All reports relating to hazardous materials policy and procedural noncompliance will be analyzed by the Senior Vice President of Flight Operations (Director of Operations), or designee, in order to identify systemic trends and ultimately to improve the hazardous materials program.
- B. All reports are received in good faith and may be submitted anonymously; however, persons submitting reports may do so without fear of reprisal or punitive action solely on the basis of submitting such reports.
- C. Questions, comments, concerns and general feedback are welcome and should be forwarded to the Director of Cargo Operations at CargoOps@mesa-air.com.
- D. Mesa Airlines, Inc. Dispatch/System Operations Control (SOC) personnel are available to clarify what is permitted for transport on Mesa Airlines, Inc. aircraft, but do not provide technical assistance with requirements for hazardous materials packaging or shipping requirements.

24-Hour SOC Phone Number: 888-634-6372

- E. For Mesa Airlines, Inc. personnel involved in the cargo-only operation, operational questions regarding hazardous materials shipments may be directed to the business partner:

The DHL Network Control Group 24-Hour Phone Number: 800-826-4903

- F. For assistance in determining if a material is hazardous and regulated by the Department of Transportation for transport by air may be obtained by contacting:

Verisk 3E 24-Hour Hotline: 800-451-8346



Hazardous Materials Manual

1.3 General

1.3.1 Identification

MISC 49 CFR 172.101

- A. It is understood that the terms *hazardous materials*, *dangerous goods*, *hazmat* and *regulated material* are synonymous.
- B. A *hazardous material* is defined as a substance that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety and property when transported in commerce.
- C. Materials which are designated as hazardous materials for the purpose of transportation may be found in 49 CFR § 172.1. All hazardous materials must conform to the requirements for transportation by air, as required by the HMR. Hazardous materials that are excepted from the HMR requirements include those described in 49 CFR 175.8 and 175.10, “Exceptions for operator equipment and items of replacement” and “Exceptions for passengers, crewmembers, and air operators”.

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Chapter 2: General Requirements

2.1 Individuals

MISC 49 CFR 175.20 49 CFR 175.30

2.1.1 Personnel

- A. The primary responsibility of all personnel in regard to this program is to recognize shipments of hazardous materials and prevent their transportation aboard aircraft operated by Mesa Airlines, Inc. when prohibited or otherwise not in compliance with the acceptance and carriage policies found within this manual.
- B. It is the responsibility of each person employed by, or acting on the behalf of, Mesa Airlines, Inc. who may, in the course of normal duties, accept or transport hazardous materials to be familiar and comply with the policies and procedures of this manual.
- C. Vendor management that oversee the operation of a facility that Mesa Airlines, Inc. services will ensure that, at all locations where cargo is accepted or processed, and where passengers check-in, check luggage and board the aircraft, or where employees prepare shipments containing hazardous materials on behalf of Mesa Airlines, Inc., personnel are trained in accordance with the policies and procedures of this manual. For Mesa Airlines, Inc. departments, internal training policies must interface with the training program, [refer to Chapter 3: "Training"](#).
- D. It is the responsibility of any person employed by, or acting on the behalf of, Mesa Airlines, Inc. to report any and all instances of non-compliance with any and all policies and procedures contained in this manual directly to the Manager of Cargo Operations and the Senior Vice President of Flight Operations (Director of Operations). This will normally be accomplished through company email; however, it is the responsibility of each person reporting any instance of non-compliance to submit such reports using the most expeditious means possible. [Refer to "Contact Information"](#).
- E. Any person found to have knowingly and willfully violated the regulations listed in 49 CFR may be subject to prosecution and/or federal imposition of fines or civil penalties and/or disciplinary action up to and including termination.
- F. No person employed by, or acting on the behalf of, Mesa Airlines, Inc. may accept, load or transport hazardous material by aircraft unless that person is trained as required by this manual. For more information, [refer to Chapter 3: "Training"](#).
- G. No person employed by, or acting on the behalf of, Mesa Airlines, Inc. may, in practice, alter, amend or in any way override the policies and procedures contained herein.
- H. No person employed by, or acting on behalf of, Mesa Airlines, Inc. may accept a hazardous material for transportation unless the hazardous material is permitted for transport by this manual, and only in compliance with the quantity limitations and other requirements for carriage of regulated materials as noted herein. The hazardous material must be properly prepared for transport as required by this manual.

2.1.2 Shippers/Passengers

It is the responsibility of each person offering a hazardous material for transportation to properly identify, classify, package, mark, label and describe the materials prior to the material being offered for transportation. The shipper is responsible for determining whether the shipment containing a regulated material will conform to domestic shipping regulations (49 CFR) or international shipping regulations (IATA DGR). All shipments offered in compliance with IATA regulations must also comply with the provisions of 49 CFR 171.22.

2.2 Facilities

MISC 49 CFR 175.25 49 CFR 175.26

2.2.1 Notification to Passengers at Air Passenger Facilities of Hazardous Materials Restrictions

MISC 49 CFR 175.25

- A. Mesa Airlines displays notifications of requirements and penalties for failure to comply to passengers at all air passenger facilities in compliance with 49 CFR 175.25.
- B. Notices are legible and must be prominently displayed so that they can be seen by passengers in locations where Mesa issues tickets, issues boarding passes, checks baggage, passenger baggage drop off areas, aircraft boarding areas/gates, and baggage claim areas.
- C. Each notice communicates the following information:
 1. Each person who engages in for hire air transportation of passengers must effectively inform passengers about hazardous materials that passengers are forbidden to transport on aircraft.
 2. A passenger is presented with information required under paragraph (a) of this section at each of the places at an airport where tickets are issued, boarding passes are issued, passenger baggage is dropped off, aircraft boarding areas are maintained, and at any other location where boarding passes are issued and/or checked baggage is accepted. This information must include visual examples of forbidden hazardous materials.

EXAMPLE

Paints, lighter fluid, fireworks, tear gases, oxygen bottles and radio-pharmaceuticals.

- D. Mesa Airlines, through the use of the United Airlines website, mobile use application, airport kiosk stations, and other electronic self-check in devices, displays a notification of forbidden dangerous goods that are not allowed for transport onboard an aircraft. This will be communicated to passengers where ticket purchase and/or boarding pass issuance can be completed without the involvement of another person. This system shall ensure:
 1. The passenger is required to acknowledge that the requisite information has been presented;

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2. The requisite information is provided to passengers:
 - a. At the point of ticket purchase or, where that is not practical, prior to issuance of a boarding pass.
 - b. At issuance of a boarding pass, or when no boarding pass is issued, prior to boarding the aircraft.
- E. Mesa Airlines, Inc. accepts United Airlines procedures and information necessary to allow personnel to implement and maintain the passenger notification system contained in the United Airlines Wingtips website.

2.2.2 Notification at Cargo Facilities of Hazardous Materials Requirements

- A. Each location where cargo for transportation by aircraft operated by Mesa Airlines, Inc. is accepted shall prominently display notices, which are compliant with 49 CFR § 175.26 (a), to persons offering such cargo of the requirements applicable to the carriage of hazardous materials aboard aircraft and the penalties for failure to comply with those requirements.
- B. The notice must be printed:
 1. Legibly in English.
 2. On a contrasting background color.
 3. Contain Visual examples, including batteries.
- C. The notice shall read as follows:
 1. Cargo containing hazardous materials (dangerous goods) for transportation by aircraft must be offered in accordance with the Federal Hazardous Materials Regulations (49 CRF Parts 171 - 180).
 2. Violations can result in five years imprisonment and penalties of \$250,000 or more (49 U.S.C. 5124).
 3. Hazardous Materials (dangerous goods) include explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives and radioactive materials.

2.2.3 DOT Hazardous Materials Markings, Labeling and Placarding Guide

Each person employed by, or acting on the behalf of, Mesa Airlines, Inc. should have readily available to them at all times the most current Department of Transportation (DOT) Hazardous Materials Markings, Labeling and Placarding Guide which should be prominently displayed at, adjacent to or within a reasonable proximity to the following locations:

- A. Where passenger baggage is accepted.
- B. Where cargo is accepted.
- C. Where baggage and/or cargo is temporarily stored.

NOTE

[Refer to Appendix A: "Forms"](#) for the DOT Hazardous Materials Markings, Labeling and Placarding Guide.

2.3 Labeling Supplies

- A. It is the responsibility of station management to maintain an adequate supply of labels for the shipment of dangerous goods and hazardous materials. If the appropriate hazardous materials label is out of stock, it must be immediately reordered and the shipment must be denied until the required label can be acquired.
- B. If a label becomes lost, detached or illegible on a package containing hazardous material after it has been accepted for transportation, the shipment must be denied loading on any aircraft until the labels are replaced in accordance with the shipper's declaration.
- C. Local personnel should use spare labeling supplies at the station to replace missing, illegible or detached labels, in accordance with the respective shipper's declaration, to the extent they are able. If there are labels missing that cannot be replaced, the shipper must be contacted by local station management to resolve the matter.

NOTE

At no time may any package containing hazardous material be accepted for transport unless the package is marked and labeled in accordance with the requirements as described herein.

2.4 Shipping Papers

MISC 49 CFR 172 Subpart C 49 CFR 175.33

- A. In general, the HMR requires that shipments containing hazardous materials be offered for transportation with accompanying shipping papers, also referred to as a *Shipper's Declaration of Dangerous Goods (DGD)*, or *Shipper's Declaration*, as described within 49 CFR 172 Subpart C.

For cargo shipments requiring shipping papers, the acceptance personnel performing the acceptance inspection of the shipment will ensure the required elements of the shipping papers include all necessary information required by regulations to accurately describe the contents and hazards of the shipment.

- B. Stations shall retain all shipping papers associated with a hazardous materials shipment for 1 calendar year (12 months) from the date of the shipment.
- C. Refer to the business partner's policy and procedures for acceptance procedures, including the verification of the required elements for shipping papers, and the required record retention as described in "[Codeshare Partner Manuals](#)".

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2.5 Hazmat Build Up Preparation / COMAT

- A. Mesa Airlines, Inc. personnel will prepare company material (COMAT) shipments containing hazardous materials and offer them to a third party shipper, in accordance with all Hazardous Materials Regulations. Mesa Airlines, Inc. does not permit COMAT containing hazardous materials to be transported on its aircraft, unless expressly excepted within this manual.
- B. Mesa Airlines, Inc. COMAT shipments containing hazardous materials intended for transport must be prepared, inspected, and accepted according to all applicable rules and regulations of the HMR. For COMAT shipments intended for air transportation, all shipments must be prepared in accordance with IATA regulations.
- C. The shipment must be identified, marked, labeled, packaged and accompanied by the proper shipping papers signed by a qualified person.
- D. No employee may prepare or offer for shipment a package containing hazmat COMAT unless that employee has passed an initial or recurrent training that covers the elements of shipper's of hazardous materials, covering the requirements for packaging hazmat for transportation by air, within the preceding 24 months (refer to [Chapter 3: "Outsourced Shippers Training" section](#)).
- E. COMAT shipments that contain hazardous material is never permitted to be shipped on any Mesa Airlines, Inc. aircraft as COMAT.
- F. The policies and procedures for preparing and shipping hazardous materials are under the authority and responsibility of the Director of Maintenance, or designee. Refer to the Mesa Airlines, Inc. *General Procedures Manual* (Manual #210) chapter for Warehouse Policies and Procedures for the full hazardous materials shipping policies and procedures.

2.5.1 Exceptions for Operator Equipment and Items of Replacement

MISC 49 CFR 175.8

- A. The following items are excepted from the requirements of the HMR, and are approved to be shipped as COMAT on any Mesa Airlines, Inc. operated aircraft, so long as they are shipped in accordance with the following requirements:
 - 1. Aviation fuel and oil in tanks that are in compliance with the installation provisions of 14 CFR, chapter 1.
 - 2. Hazardous materials required aboard an aircraft in accordance with the applicable airworthiness requirements and operating regulations.
 - 3. Items of replacement for hazardous materials required aboard an aircraft that are to be sent via COMAT, in accordance with 49 CFR 175.8(a)(3), include the following exceptions:
 - a. In place of required packaging(s), packaging(s) specifically designed for the items of replacement may be used, provided such packaging(s) provide at least an equivalent level of protection to those that would be required by this sub chapter.
 - b. Aircraft batteries are not subject to quantity limitations such as those provided in 49 CFR 172.101 or 49 CFR 175.75(c).

B. Other operator exceptions:

1. Dry ice (carbon dioxide, solid) intended for use by the operator in food and beverage service aboard the aircraft.
2. Aircraft tire assemblies, which contain hazardous material in a gas form, are excepted when conforming to the requirements of [Chapter 6: "Aircraft Tires" section](#).
3. Shipment contents must meet the requirements of the federal hazardous materials regulations, be listed in the HMR as an excepted hazardous material, and be covered by the exceptions permitted under 49 CFR 173.4a - Excepted quantities.
4. Aviation oil in original packaging not to exceed 24 one-quart cans per package is also permitted to be transported at COMAT.

NOTE

1. Hyjet is not regulated for air transport when carried in its original packaging.
 2. Skydrol hydraulic fluid is not regulated under 49 CFR if in the original packaging of 119 gallon capacity or less.
 5. Oxygen, or any hazardous material used for the generation of oxygen, for medical use by a passenger, which is furnished by Mesa Airlines, Inc. in accordance with 14 CFR 121.574.
- C. Only trained and authorized personnel are permitted to package and offer shipments containing excepted items from this section. [Chapter 3: "Outsourced Shippers Training" section](#) for more information.

END

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Chapter 3: Training

3.1 General

3.1.1 Governance

14 CFR: 121.1003

Prior to implementation or modification of this training program, Mesa Airlines, Inc. is required to receive approval from the Federal Aviation Administration (FAA).

3.1.2 Purpose and Scope

14 CFR: 121.1001

MISC 49 CFR 172.704

- A. The purpose of training required by this manual is to ensure that each person performing or directly supervising any of the functions described in this paragraph is provided hazardous materials general awareness and safety related instruction ([refer to Table 3-1: "Training Program"](#)) in accordance with the Hazardous Materials Regulations (HMR). These functions include:
1. Acceptance.
 2. Refusal.
 3. Handling.
 4. Storage Incidental to Transport.
 5. Packaging of Company Material.
 6. Loading.
- B. Persons employed by, or acting on the behalf of, Mesa Airlines, Inc. whose responsibility it will be, in whole or in part, to prepare hazardous materials must additionally complete job-specific training using an FAA approved course in accordance with 49 CFR prior to the assignment of their duties.
- C. Training in accordance with this chapter is required for those who perform or immediately supervise the following functions:
1. Persons who accept cargo, packages or passenger baggage.
 2. Persons working in supply, storage or warehouse facilities who are involved in shipping of aircraft parts, supplies or company material (COMAT).
 3. Persons who handle, store and load or unload packages, passenger baggage or cargo.
 4. Persons engaged in passenger and baggage check-in services (e.g. skycaps, ticket counter agents, flight attendants, etc).
 5. Persons responsible for cargo during flight (including pilots, flight attendants, dispatchers).
 6. Flight crewmembers who do not perform any functions listed above.

3.1.3 Department Administration

- A. The training policies found within this chapter interface with different operations departments of Mesa Airlines, Inc. As referenced below, each department facilitates the appropriate level of hazardous materials training for the personnel within their department, in accordance with each department's internal policies.
- B. The Manager of Cargo Operations and Manager of Airport Operations & Safety Assurance are responsible for maintaining and updating this chapter as it relates to the respective cargo only and passenger carrying operations, and all ground training functions.
- C. At a minimum, all hazardous materials training content will be reviewed annually, in conjunction with the annual program review, conducted by the Sr. Vice President of Flight Operations, or designee. Training content must also be reviewed and validated to conform to any updated requirements of the IATA DGR, 49 CFR or any other relevant regulations that are updated and interface with this manual. Review of any codeshare policies, procedure or training will also be validated to ensure that all shipments with hazardous materials conform to the requirements of this manual and all applicable regulations.
- D. Updates to training will be made in accordance with the policies and procedures of change management, as described within the Mesa Airlines, Inc. *Safety Management System Manual* (Manual #550), and the Sr. Vice President of Flight Operations, or designee, will submit the updates to the training program to the FAA for approval before they become effective.
- E. Inflight crewmembers, Flight Operations crewmembers and Dispatch personnel receive hazardous materials training, in accordance with this chapter, provided by their department's approved training program. Personnel authorized as instructors in accordance with the respective training program are qualified as hazardous materials instructors in this program, for their department. Refer to the respective Mesa Airlines, Inc. *Flight Operations Training Manual* Volume for further information about authorized instructors within the Flight Operations training programs.
- F. Maintenance personnel are given general awareness hazardous materials training, in accordance with this chapter, through the Maintenance training department. Personnel authorized as instructors in accordance with the Maintenance training program are qualified as hazardous materials instructors in the program, for their department. Refer to the respective Mesa Airlines, Inc. *Maintenance Training Manual* for further information about authorized instructors within maintenance training.
- G. Each respective department is responsible for the tracking of all employees required to take initial or job-specific hazardous materials training, and ensuring that all initial and recurrent training meets the requirements of this chapter. All training policies of the respective department will interface with the minimum requirements of this chapter and each department must maintain their employee's training records in accordance with their department procedures.

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- H. Mesa Airlines, Inc. does not provide internal training for packing and shipping hazardous materials. Warehouse personnel that are required, in the course of their normal job functions, to prepare or offer shipments containing hazardous materials must complete additional training in that specific function. This training is tracked by maintenance training personnel, and outsourced training for shippers must be in accordance with the requirements of 49 CFR. The Director of Maintenance, or designee, is responsible for ensuring that all outsourced training for hazardous materials shippers conform to the requirements of 49 CFR and this hazardous materials program.

3.1.4 Training Validation

- A. During vendor oversight audits, as described within the *Station Compliance Handbook*, auditors will verify that ground personnel performing duties related to hazardous materials are trained in accordance with this chapter.
- B. Each Mesa Airlines, Inc. department that facilitates hazardous materials training for their personnel are responsible for ensuring that required personnel within their department have successfully taken hazardous materials training, in accordance with their job role and the requirements of this chapter.

3.2 Employee Training

3.2.1 Requirements

14 CFR: 121.1003 121.1005

- A. Except as provided in this paragraph, no individual may perform, or be assigned to perform, any of the functions or supervisory responsibilities specified in this manual unless that person has satisfactorily completed the Hazardous Materials Training Program, as described within this chapter, within the previous 12 months.
- B. Training will be conducted in accordance with the policies and procedures located within this chapter.
- C. Training will be conducted by a qualified instructor, or online via Comply365 Learning Management System (LMS) for departments utilizing electronic delivery of hazardous materials training.
- D. Employees accepting dangerous goods for shipment as cargo must be able to understand, read, write and speak English in addition to the language of the state of origin. This measure is in place to ensure employees are able to accurately read and understand the hazardous material labels applicable to the shipment of air cargo.
- E. Employees must comply with Mesa Airlines, Inc. policies and procedures and be knowledgeable of their duties and responsibilities when handling hazardous materials.

- F. The training program contains policies and procedures providing specific guidance on acceptance of HAZMAT for air shipment including:
1. Proper packaging, marking, labeling, and documentation.
 2. A prohibition against leaking or damaged packaging.
 3. Authorizing and labeling HAZMAT for carriage on passenger aircraft or labeled for cargo-only aircraft (if not authorized for passenger aircraft).
 4. Requiring identification and markings per 49 CFR Part 172 or ICAO Transportation Index.
 5. Ensuring shipping papers include all required information.
- G. When applicable, the training program contains policies and procedures providing specific guidance on the storage of hazardous materials including storage of:
1. Class 8 (corrosive) materials
 2. Class 7 (radioactive) materials
 3. Class 6 Division 6.1 (poisonous) materials

3.2.2 Test Scores

Each individual must pass a test at the end of any hazardous materials training. Prior to the test commencing, the instructor(s) will ensure that all questions regarding hazardous materials training have been answered. A minimum score of 80% is required to pass any Mesa Airlines, Inc. hazardous materials courses.

3.2.3 Initial Training

Personnel performing or supervising any of the functions listed in this chapter must receive hazardous materials training prior to conducting business on behalf of Mesa Airlines, Inc. This will be completed within 30 days of the hire date or a change in job function in accordance with 14 CFR 121.1005.

3.2.4 Training Validity and Recurrent Training

Training in the hazardous materials program must be completed on an annual basis. A person who satisfactorily completes recurrent hazardous materials training in the calendar month before, or the calendar month after, the month in which the recurrent training is due is considered to have taken that training during the month in which it is due. If the person completes this training earlier than the month before it is due, the month of the completion date becomes his or her new anniversary month. If the person did not complete the required training by the last day of the 13th month following initial/recurrent training, the person will be required to go back through the initial training program and shall not be permitted to perform any of the functions described within this manual until their training is complete in accordance with the policies of this chapter.

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3.2.5 Training Records

14 CFR: 121.1007

- A. Mesa Airlines, Inc. is required to maintain a record of all training received within the previous three years for each person who performs or supervises a function specified in this chapter.
- B. These records must be maintained during the time that the person performs or supervises any of the functions specified in this chapter and for 90 calendar days after their final date of employment.
- C. Training records required by this section must be made available when requested by Mesa Airlines, Inc. representatives of other regulatory entities, at the location where the trained person performs or supervises the functions specified in this chapter.

NOTE

Electronic training records must be accessible at the location where the trained person performs or supervises the functions specified in this chapter.

- D. If station leadership at an online station are unable to retain the documentation at that location for the required period of time, station management will contact the Mesa Airlines, Inc. Manager of Cargo Operations for additional guidance. In such cases, the records may be forwarded to and retained by Mesa Airlines, Inc. at its principal place of business.
- E. Hazardous materials training records for all other Mesa Airlines, Inc. employed personnel (i.e. flight crews, maintenance and stores personnel) will be retained at the appropriate facility where training records for these types of personnel are normally located.
- F. The hazardous materials training record must include:
 - 1. The individual's name.
 - 2. The most recent training completion date.
 - 3. A description, copy or reference to training materials used to meet the training requirement.
 - 4. The name and address of the organization providing the training.
 - 5. A copy of the certification issued when the individual was trained, which shows that a test has been completed satisfactorily.
- G. All training personnel will adhere to the provisions of 14 CFR 121.9, and will:
 - 1. Not make any fraudulent or intentionally false statement, on any application, test results or training records required by this manual or the Code of Federal Regulations.
 - 2. Not make any fraudulent or intentionally false statement, or a known omission from, any record or report that is made, kept or used to show compliance with the requirements of this manual or the Code of Federal Regulations.

3.3 Training Program

Table 3-1: Training Program

Aspects of transport of hazardous materials by air with which they must be familiar, as a minimum (See Note 1)	Shippers (See Note 2) Will-carry	Operators and ground-handling agent's staff accepting hazardous materials (See Note 3) Will-carry	Operators and ground-handling agent's staff responsible for the handling, storage, and loading of cargo and baggage Will-carry	Passenger-handling staff Will-carry	Flight crew members and load planners Will-carry	Crew members (other than flight crew members) Will-carry
General Philosophy	X	X	X	X	X	X
Limitations	X	X	X	X	X	X
General Requirements for Shippers	X	X				
Classification	X	X				
List of Hazardous Materials	X	X			X	
General Packing Requirements	X	X				
Labeling and Marking	X	X	X	X	X	X
Hazardous Materials Transport Document and other Relevant Documentation	X	X				
Acceptance Procedures		X				
Recognition of Undeclared Hazardous Materials	X	X	X	X	X	X
Storage and Loading Procedures		X	X		X	
Pilots' Notification		X	X		X	
Provisions for Passengers and Crew		X	X	X	X	X
Emergency Procedures	X	X	X	X	X	X

NOTE 1 Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in the table.

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- NOTE 2 When a person offers a consignment of hazmat, including COMAT, for or on behalf of the certificate holder, then the person must be trained in the certificate holder's training program and comply with shipper responsibilities and training. If offering goods on another certificate holder's equipment, the person must be trained in compliance with the training requirements in 49 CFR. All shippers of hazmat must be trained under 49 CFR. The shipper functions in 49 CFR mirror the training aspects that must be covered for any shipper offering hazmat for transport.
- NOTE 3 When an operator, its subsidiary, or an agent of the operator is undertaking the responsibilities of acceptance staff, such as the passenger handling staff accepting small parcel cargo, the certificate holder, its subsidiary or the agent must be trained in the certificate holder's training program and comply with the acceptance staff training requirements.

3.3.1 IATA Training Requirements

- A. For personnel employed by, or those contracted on behalf of Mesa Airlines, Inc., or their business partner entities, that are required to complete hazardous materials training, the content must include all associated requirements to conform to the training standards listed within the IATA DGR.
- B. In accordance with the IATA DGR Section 1.7, security awareness training should be provided to employees involved in the transportation of hazardous materials.

3.3.2 Requirements

This training program is required for persons who perform or immediately supervise the following functions:

- A. Persons who accept cargo, packages or passenger baggage.
- B. Persons working in supply, storage or warehouse facilities who are involved in shipping of aircraft parts, supplies or company material (COMAT).
- C. Persons who handle, store and load or unload packages, passenger baggage or cargo.
- D. Persons engaged in passenger and baggage check-in services (e.g. skycaps, ticket counter agents, flight attendants, etc).
- E. Persons responsible for cargo during flight (including pilots, flight attendants, dispatchers).
- F. Flight crewmembers who do not perform any functions listed above.

3.3.3 Hazardous Materials Course

NOTE

Mesa accepts other air carriers training, [refer to "Accepted Hazardous Materials Training Programs"](#).

- A. The training provided in this course must include a review of the following areas:
 - 1. Administration of the Mesa Airlines, Inc. *Hazardous Materials Manual*
 - a. Responsibility and Authority
 - b. Compliance with Regulations and Operations Specifications
 - c. Terminology

2. General Philosophy
 - a. Required DG Training subjects - Appendix O to 14 CFR Part 121
 - b. Applicable Regulatory Resources
 - c. Overview of 49 CFR
 - d. Use of ICAO Technical Instructions - 49 CFR 171.22
 - e. Use of IATA Dangerous Goods Regulations - 49 CFR 171.22
 - f. Definitions Used in Air Transportation of Hazardous Materials - 49 CFR 171.8
 - g. General Transportation Requirements - 49 CFR 171.2
 - h. Transport by Aircraft - 49 CFR Part 175
 - i. Training Requirements and Record-keeping - 49 CFR 172.700
 - j. Recognition of Hazardous Materials
 - k. Enforcement
 - l. Hazardous Materials Security
3. Limitations
 - a. Hazardous Materials Forbidden on Aircraft Under any Circumstances
 - b. Hazardous Materials Forbidden Unless Exempted
 - c. Hidden Hazardous Materials
 - d. Hazardous Materials Carried by Passenger or Crew
 - e. Hazardous Material Policy Differences for Passenger-Carrying and Cargo-Only Aircraft
4. General Requirements
 - a. For Shippers:
 - 1) Shippers Specific Responsibilities and Compliance to Regulations
 - b. For COMAT:
 - 1) Identify and Recognize DG COMAT:
 - a) Hazardous Materials Onboard Aircraft
 - b) Replacement Components
 - c) Consumable Materials
 - 2) Prohibition of COMAT shipments containing hazardous materials not specifically permitted by this manual.
 - 3) Prohibition of packaging shipments containing company material that contain hazardous materials by any personnel not already certified via outsourced, third-party DG shippers training.
 - 4) Facility Storage, Safe Movement and Disposal/Handling Requirements for DG COMAT.

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5. Classification
 - a. Hazardous Materials Classification - 49 CFR Parts 172.101, 173.2, and 173.2(a)
 - b. Unacceptable Hazardous Materials - 49 CFR Parts 172.101, 173.21, and 175.3
6. List of Hazardous Materials
 - a. Purpose and Use of the Hazardous Materials Tables - 49 CFR 172.101
 - b. Proper Shipping Names - 49 CFR Parts 172.101 and 172.202
 - c. Hazard Class (Definitions) - 49 CFR Parts 172.101 and 173.50-173.144
 - d. UN/ID Numbers - 49 CFR Parts 172.101 and 172.202
 - e. Packing Group - 49 CFR Parts 172.101 and 172.202
7. General Packing Requirements
 - a. Shippers Responsibilities - 49 CFR Parts 171.2(e) and 171.12
 - b. General Packing Requirements - 49 CFR Parts 173.24, 173.24(a), and 173.27
 - c. Packing Instructions and Assignments - 49 CFR Parts 172.101 and Part 173
 - d. Packaging of COMAT - 49 CFR 175.8
 - e. Small Quantity Exceptions - 49 CFR 173.4
 - f. Limited Quantity Exceptions - 49 CFR Parts 173.150-173.156
8. Labeling and Marking
 - a. Markings Required on Packages Containing Hazardous Materials - 49 CFR Subpart D
 - b. Labels Required on Packages Containing Hazardous Materials - 49 CFR Subpart E
9. Hazardous Materials Transport Document and Other Relevant Documentation
 - a. Shipper's Certification Requirements for Hazardous Materials - 49 CFR 172.204
 - b. Shipping Paper Requirements - 49 CFR Parts 172.200 and 172.201
 - c. Description of Hazardous Materials Required on Shipping Papers - 49 CFR Parts 172.202 and 172.203
 - d. Shipping Papers for Hazardous Materials aboard Aircraft - 49 CFR 175.33
 - e. Company Checklists - Appendix F: Acceptance Checklists
10. Acceptance Procedures
 - a. Acceptance Procedures and Requirements for DG - 49 CFR Parts 171.2(e), 175.3, and 175.30
 - b. Rejection Procedures and Requirements for DG that does not conform to the HMR or requirements of this manual, or that appears to contain undeclared DG - 49 CFR Parts 171.2(e), 175.3, and 175.30

- c. Passenger and Cargo Information Signage Requirements - 49 CFR Parts 175.25 and 175.26
- d. Unit Load Device and Package Inspection - 49 CFR 175.88
- 11. Recognition of Undeclared Hazardous Materials
 - a. Hidden Shipment Indicators - Appendix A
 - b. Suspicious Cargo and Baggage Awareness
 - c. Hazardous Materials Discrepancy/Incident Reporting - 49 CFR Parts 171.15, 171.16, 175.31, and Appendix D
- 12. Storage and Loading Procedures
 - a. Unit Load Device (ULD) and Package Inspection - 49 CFR 175.88
 - b. Quantity Limitations aboard Aircraft - 49 CFR 175.75
 - c. Stowage Compatibility - 49 CFR 175.78
 - 1) Special handling requirement for Class 6 (Div 6.1. 6.2 - 49CFR 175.630), Class 7 (49CFR 175.701, 702, 703), and Class 8 per 49CFR 175.78.
 - d. Stowage and Segregation
 - e. Orientation of Packages - 49 CFR 175.88
 - f. Securing Packages - 49 CFR 175.88
 - g. Location of Packages - 49 CFR 175.75
 - h. Damaged Shipments of Hazardous Materials - 49 CFR 175.90
- 13. Pilot Notification
 - a. Notification to Captain (NOTOC) - 49 CFR 175.33
 - b. Emergency Response Information - 49 CFR Subpart G
- 14. Provisions for Passenger and Crew
 - a. Hazardous Material Exceptions - 49 CFR 175.10
- 15. Emergency Procedures
 - a. Use of North American Emergency Response Guidebook (Cargo Facility/Ground Handling)
 - b. Use of International Civil Aviation Organization (ICAO) Red Book or similar reference (Onboard Aircraft)
 - c. Leaking shipment or spill response
 - d. Fire or explosion response actions
 - e. Radioactive contamination per 49 CFR 175.705.

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3.4 Accepted Hazardous Materials Training Programs

3.4.1 General

Mesa Airlines, Inc. operates flights on behalf of its codeshare partners who contractually provide ground services, either with their personnel or a contracted vendors', for all flights that Mesa Airlines, Inc. operates on behalf of the codeshare. Station leadership will ensure that all employees that accept or handle cargo, or employees that process passengers, on behalf of Mesa Airlines, Inc., are trained in accordance with the approved codeshare training programs, as described within this section.

3.4.2 Approved Codeshare Vendor Training

The following hazardous materials training programs have been reviewed and accepted as training that meets or exceeds the requirements of the Mesa Airlines, Inc. hazardous materials training program. Vendors trained in a program listed within this section are not required to take Mesa Airlines, Inc. provided hazardous materials training but are only permitted to fulfill duties and responsibilities related to hazardous materials on the codeshare operation they are specifically trained in.

A. United Airlines

The United Airlines Dangerous Goods Program contains the required training to include any differences prescribed by this manual as the information contained therein is equivalent or more restrictive than that of Mesa Airlines, Inc. Documentation for persons trained in the United Airlines Dangerous Goods Program will be maintained at the station according to the policies and procedures of the United Airlines *Regional Ground Operations Manual*.

B. The Manager of Airport Operations & Safety Assurance will review, annually, the United Airlines training for hazardous materials to ensure it conforms to the requirements set forth by this manual, and that all limitations, policies and procedures are appropriately represented within the codeshare training program(s).

C. The DHL Dangerous Goods Training Program, as maintained by DHL in the DHL GSAM and associated dangerous goods policies and procedures, contains the required elements of hazardous materials training, including differences contained within this manual, and meet or exceed the requirements of Mesa Airlines, Inc. hazardous materials program. Documentation for persons trained in the DHL Dangerous Goods Program will be maintained at the station according to the policies and procedures of the DHL GSAM.

The Mesa Airlines, Inc. Manager of Cargo Operations will review and approve all hazardous materials courses, or any updates to that training, that are accepted by Mesa Airlines, Inc. for personnel performing functions related to hazardous materials in the cargo-only operation.

3.4.3 Codeshare Vendor Training Review Process

- A. When changes are scheduled to be made to the codeshare training programs listed in the above section, the main codeshare liaison will be notified in advance through the normal codeshare approval procedures, as described within each publication. For passenger operations, the liaison is the Manager of Airport Operations & Safety Assurance. For cargo operations, the liaison is the Manager of Cargo Operations.
- B. When the training program is reviewed, the respective manager will ensure that the policies and procedures described within the training:
 - 1. Interface with what is described within the documented codeshare procedures.
 - 2. Adheres to and satisfies all training content requirements of the HMR, 121 CFR Appendix O, the IATA DGR.
 - 3. Contains accurate limitations or additional controls that Mesa Airlines, Inc. requires for the transportation of hazardous materials onboard Mesa Airlines, Inc. operated aircraft.

3.5 Outsourced Training

Mesa Airlines, Inc. may outsource station training to third party entities. The Senior Vice President of Flight Operations (Director of Operations) will schedule, have authority over, be responsible for, and be accountable for the quality and content of all outsourced training. All outsourced trainers will be trained and documented in accordance with this manual. All training events will be completed in accordance with the training policies within this chapter. The Senior Vice President of Flight Operations (Director of Operations) will ensure that audits of contractors are not contracted to the same contractor providing the service.

3.5.1 Outsourced Shippers Training

- A. For maintenance and warehouse employees whose job functions include preparing hazardous materials for their proper shipment, outsourced shipper's training must be secured via an approved training vendor that conforms to the requirements found within this manual.
- B. No employee, agent, vendor, or contractor working on behalf of Mesa Airlines, Inc. or its Business Partners, shall prepare hazardous materials for shipment, including COMAT, unless specifically trained in this function.

3.6 Training Inquires

All inquiries regarding Hazardous Materials Training should be directed to the Manager of Cargo Operations via phone or email.

Email: CargoOps@mesa-air.com
Phone: 602-685-4000

END



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Chapter 4: Emergency Procedures

4.1 General

- A. The safety of individuals, equipment and facilities related to the handling and transportation of hazardous materials is of paramount importance.
- B. Should an incident occur involving hazardous materials, the primary objective is to protect yourself and others from injury or exposure. Individuals who are unqualified to respond appropriately to hazardous materials incidents should not interfere or take the place of qualified hazardous materials emergency responders.
- C. For all hazardous materials emergencies involving Mesa Airlines, Inc. aircraft, onsite personnel should notify Mesa Airlines, Inc. System Operations Control (SOC) as soon as possible regarding the event so that as much information about the event can be identified and documented for review, and so that proper notification can be made to the appropriate Mesa Airlines, Inc. representatives. [Refer to 1.2.8 "Contact Information"](#) for information on contacting SOC. [Refer to Chapter 8: "Irregularities"](#) for specific reporting requirements.

4.2 Emergency Procedures on the Ground

- A. During emergencies, prompt and clear communication and awareness is required to ensure that personnel remain safe and protected.
- B. The following procedures are only the initial procedures for frontline personnel to follow during the onset of an emergency. Flight crewmembers, while on the ground, should follow the respective departments normal emergency response policies and procedures for emergencies occurring on the ground. For all reporting requirements for accidents and incidents, which are in addition to those procedures found within this chapter, [refer to Chapter 8: "Irregularities"](#).
- C. The following guidance is generic for any operation. For specific emergency response procedures for ground handling personnel, refer to the appropriated business partner's manual, identified in ["Codeshare Partner Manuals"](#), for the full policies and procedures for responding to and reporting emergencies.

4.2.1 Fire

- A. Notify the Pilot-In-Command if applicable.
- B. Evacuate the aircraft immediately if applicable.
- C. Notify airport emergency response crews.

CAUTION

Do not attempt to open cargo compartment doors.

CAUTION

Do not attempt to fight the fire unless you have been trained to respond using the correct fire fighting equipment.

- D. The Station Manager, Supervisor or most senior agent on duty should begin the most applicable response for this situation found in the Mesa Airlines, Inc. *Emergency Manual* (Manual #500).
- E. Station personnel, or the flight crew, should provide any possible identification of hazardous materials involved to emergency responders. Most often, this is in the form of a NOTOC or by providing emergency responders with detailed, confirmed information about what shipments and regulated materials are involved.

4.2.2 Hazardous Materials Spill or Aircraft Contamination

- A. Notify the Pilot-In-Command, if applicable, and direct an evacuation if necessary.
- B. Notify airport emergency response crews. Do not delay calling emergency response crews for any reason when hazardous material spills or contamination occurs.
- C. Avoid contact with the substance.
- D. Isolate the area and move individuals to areas upwind of the spill.
- E. The Station Manager, Supervisor or most senior agent on duty should begin the most applicable response for this situation found in the Mesa Airlines, Inc. *Emergency Manual* (Manual #500). Mesa Airlines, Inc. SOC personnel should be notified as soon as practical to help facilitate the emergency response and document the necessary information for reporting the incident as described in [Chapter 8: "Irregularities"](#).
- F. Station personnel, or the flight crew, should provide any possible identification of hazardous materials involved to emergency responders. Most often, this is in the form of a NOTOC or by providing emergency responders with detailed, confirmed information about what shipments and regulated materials are involved.
- G. Isolate baggage and/or cargo that have been involved in the spill if possible. Do not release bags, cargo or mail until they have been decontaminated or disposed of properly.
 - 1. If baggage, cargo or mail that is potentially involved in a hazardous materials spill has been transferred to another aircraft, the baggage claim area or a cargo facility prior to the discovery that it is involved in a hazardous materials spill, immediately notify those areas to hold packages until contamination levels can be determined.
 - 2. If the materials are en route to another destination, contact Mesa Airlines, Inc. Dispatch immediately so that the Pilot-In-Command of the aircraft can be notified of any potential danger.
 - 3. Store or isolate baggage that is suspected to be contaminated in a well-ventilated and secure area (preferably outdoors).

WARNING

Do not store such bags in an area where they may come into contact with other employees or the general public.

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4.2.3 Damaged or Leaking Shipments

- A. If a package containing hazardous materials appears to be damaged or leaking:
1. Keep handling to a minimum.
 2. The person discovering the leakage, if at an aircraft, will contact the Pilot-in-Command immediately, and then notify hazard disposal teams as appropriate.
 3. Packages adjacent to the leaking package must be checked for contamination and all contaminated packages withheld from further transportation until it is ascertained that they can be safely transported.
 4. In the event of leakage, or suspected leakage, the compartment(s) or ULD(s) in which the package was carried must be inspected for contamination. All contamination must be removed by appropriately trained individuals prior to the item's return to service.
 5. In the event a package containing hazardous material is loaded into an aircraft compartment or ULD, and subsequently discovered to be leaking or damaged, the package, and other contaminated packages, must be removed safely from the ULD or compartment, until safe transportation or disposal is arranged with the shipper.
- B. Any package containing hazardous materials that is found to be leaking or damaged after being accepted by Mesa Airlines, Inc. must be reported to local station management and Mesa Airlines, Inc. SOC, in addition to the reporting requirements of this manual. [Refer to Chapter 8: "Irregularities"](#) for further reporting procedures.

4.2.4 Spills, Leaks or Aircraft Contamination of Radioactive Material

- A. If a package containing radioactive material is discovered to be leaking, or having contaminated the aircraft, flight crews and/or ground vendor personnel must notify Mesa Airlines, Inc. SOC by phone as soon as safely possible. Ensure to begin evacuating and leaving the area until emergency personnel respond.
- B. Once radioactive contamination has been confirmed, SOC personnel will notify the Vice President of Safety and Security to ensure that a vendor is contracted to decontaminate the aircraft safely and permit it's return to service. This will be coordinated with Flight Operations and other senior company leadership.
- C. The Vice President of Safety and Security may contact the US Nuclear Regulatory Commission at their 24-Hour Emergency Operations Center by calling 301-816-5100 for hazardous materials incidents involving radioactive materials.
- D. [Refer to Chapter 8: "Irregularities"](#) for information about the reporting requirements that must be met when hazardous material shipments are found to spill or leak their contents.

4.3 Emergency Procedures When Airborne (Flight Crews)

- A. The information contained within this section is intended to be the general guidance to crewmembers for responding to emergent situations, while in flight, that involve hazardous materials. Crewmembers should follow the policies and procedures of the Flight Operations department, and the respective aircraft flight manuals, such as the *Company Flight Manual* or *Quick Reference Handbook*. Ensure SOC is notified of the event so the required information for reportable hazardous materials events is documented as described in [Chapter 8: "Irregularities"](#).
- B. Fire, Spills or Leaks Involving Hazardous Materials
1. For all suspected fires, spills or leaks that develop while in flight, firstly follow all appropriate aircraft emergency procedures. This includes any checklists or other emergency procedures contained within the Flight Operations manuals, as described in the beginning of this section.
 2. Consider landing as soon as possible/practicable, appropriate to the situation.
 3. Determine what hazardous materials may be involved in the incident by referring to the flight's NOTOC. For cargo only operations, the NOTOC will contain the ICAO Emergency Response Drill Code, and associated emergency response guidance for the regulated materials onboard. Flight crewmembers are encouraged to use this information to understand the potential risk of the situation, and act accordingly.
 4. After the aircraft lands, immediately provide the flight deck copy of the NOTOC to the emergency responders, so they may determine the best response to the situation.

END

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Chapter 5: General Operations

5.1 Classification

This chapter is intended to provide an overview and reference to the classifications of hazardous materials. For more detailed information, [refer to Chapter 7: "Hazardous Materials Approved for Mesa Airlines, Inc. Cargo Only Operations"](#) in this manual.

5.1.1 General

- A. It is understood that the terms *classification*, *class* and *hazard class* are synonymous.
- B. The intent of this section is to provide a basic familiarization and description of the classification and labeling system used by shippers of hazardous materials to better recognize and identify hazardous materials offered for transport. This section in no way endorses the carriage of any hazardous materials represented herein.
- C. Hazardous materials are classified based on their respective hazards and as determined by the United Nations Committee of Experts on the Transportation of Dangerous Goods. Classification numbers DO NOT represent the degree of danger associated with a particular hazardous material.
- D. There are nine hazard classes which may be further subdivided into divisions. A division is a two-digit number in which the first digit repeats the class number (for example, division I of hazard class 4 would be noted as 4.1). The class and/or division number may replace the written name of the hazard class in shipping paper descriptions and on hazardous materials placards or labels.

5.1.2 Hazard Class Labels

Approved hazard warning labels are derived from the current Department of Transportation (DOT) Hazardous Materials Markings, Labeling and Placarding Guide. [Refer to Appendix A: "Forms"](#) for a copy of the guide.

- A. No package or container may be accepted for transportation if it bears labels or markings which identify the material therein as a material which cannot be transported aboard a Mesa Airlines, Inc. aircraft pursuant to the provisions of this manual and/or federal regulations.
- B. No package or container may be accepted for transportation if it bears labels or markings which are not consistent with the contents of the package or container.
- C. No package or container may be accepted for transportation if the package or container bears labels or markings indicating a hazardous material is present when there is no hazardous material present. If this is determined upon investigation of the contents of the package, the labels and/or markings must be obliterated, destroyed or entirely removed from the package or container prior to acceptance.
- D. No person may deface, alter, destroy or mitigate the display of labels or markings which correctly identify that a package or container holds a hazardous material.

5.1.3 Hazard Classifications

5.1.3.1 Class 1 Explosives

Any substance or article, including a device, which is designed to function by explosion, or which, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion. Some examples of hazardous materials in Class I include, but are not limited to, small arms ammunition, fireworks, toy caps and blasting caps.

A. Divisions

Explosives are divided into six divisions with Division 1.1, consisting of mass explosion hazard such as dynamite, through division 1.6, consisting of extremely insensitive articles that do not have a mass explosion hazard.

5.1.3.2 Class 2 Compressed Gases

Compressed gas is broadly defined as gas stored at a high pressure. Compressed gases have the physical hazard of the pressurized container in addition to the chemical hazard associated with the material. Some examples of this hazardous material include, but are not limited to, propane or butane (division 2.1); oxygen, carbon dioxide and fire extinguishers (division 2.2); and chlorine and hydrogen sulfide (division 2.3).

A. Divisions

Compressed gases are divided into three divisions: Division 2.1, flammable gases; Division 2.2, non-flammable gases; and Division 2.3, poisonous gases.

5.1.3.3 Class 3 Flammable Liquids

Flammable liquids are liquids that have a flash point of not more than 60°C (140°F), or any material in a liquid phase with a flash point at or above 37.8°C (100°F). Solvents and household chemicals fall into this hazard class. Some examples of this hazardous material include, but are not limited to, gasoline, diesel fuel, acetone, rubbing alcohol, paints, lighter fluid and petroleum.

A. Divisions

This class has no divisions.

5.1.3.4 Class 4 Flammable Solids

Materials, other than explosives, which are liable to catch fire through friction, absorption of moisture, spontaneous chemical changes or heat retained from processing. Some examples of this hazardous material include, but are not limited to, "strike anywhere" and safety matches, gunpowder, oily fabrics, some films, phosphorous, sodium and barium.

A. Divisions

Flammable solids are divided into three divisions: Division 4.1, flammable solids, Division 4.2, spontaneously combustible, and Division 4.3 dangerous when wet.

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5.1.3.5 Class 5 Oxidizers and Organic Peroxides

An oxidizer is a material that may, by yielding oxygen, cause or enhance the combustion of other materials. For a fire to occur, there must be three components: oxygen, fuel and temperature/heat (referred to as “the fire triangle”). An oxidizer enhances fire by increasing the oxygen component. Organic peroxide provides both fuel and oxygen in its chemical structure and therefore increases the risk of fire, should it encounter the right temperature. Some examples of hazardous materials in this class and divisions include, but are not limited to, oxygen (in liquid or gas form), oxygen generators, strong hydrogen peroxide (greater than 8% solutions), benzyl peroxide (in its pure form), various pool chemicals (liquid and solid) and ammonium nitrate fertilizers.

A. Divisions

This hazard class is divided into two divisions: Division 5.1, Oxidizers, and Division 5.2, Organic Peroxides.

5.1.3.6 Class 6 Poisons and Infectious Substances

Poisons are broadly defined as materials that are known to be so toxic to humans as to afford a hazard to health during transportation. (Poisonous gas, however, is classified as Class 2, Division 2.3.) Infectious substances are defined as a viable microorganism or its toxin that causes or may cause disease in humans or animals and includes those agents listed in 42 CFR 72.3 and any other agent that causes or may cause severe, disabling or fatal disease. Some examples of hazardous materials in this class and divisions include, but are not limited to, pesticides, herbicides, insecticides, cyanide, rabies, hepatitis, bacterial strains and infectious blood samples. Hazardous materials in this class and divisions may also bear the biohazard label in addition to the hazard warning label.

NOTE

The terms *infectious*, *infectious substance* and *etiological agent* are synonymous.

A. Divisions

This hazard class is divided into two divisions: Division 6.1, Poisons, and Division 6.2, Infectious Substances.

5.1.3.7 Class 7 Radioactive Materials

Radioactive materials are articles or substances that spontaneously and continuously emit certain types of radiation (ionizing radiation) which can be harmful to health, but which cannot be detected by any of the human senses. There are no specific examples of this hazardous material; however, radioactive materials can be any material having a specific activity greater than 0.002 micro curie per gram, where specific gravity is the activity of the radio nuclide per unit mass of that nuclide.

A. Divisions

This hazard class is divided into three categories: Class 7 Category I, Class 7 Category II and Class 7 Category III.

5.1.3.8 Class 8 Corrosives

Corrosive materials are liquids or solids that cause full thickness destruction of human skin at the site of contact within a specified period of time. A liquid that has a severe corrosion rate on steel or aluminum is also considered a corrosive material. Some examples of hazardous materials in this class include, but are not limited to, wet cell (or spillable) batteries, car batteries, acids, bleach solutions, various household cleaners and mercury.

A. Divisions

This hazard class has no divisions.

5.1.3.9 Class 9 Miscellaneous Hazardous Materials

Miscellaneous hazardous materials include materials that present a hazard during transportation but do not meet the definition of any other hazard class. Some examples of hazardous materials in this class include, but are not limited to, dry ice, asbestos, protective breathing equipment (PBE) or any material that has an anesthetic or noxious property that could cause extreme annoyance or discomfort to a flight crewmember and prevent them from performing their duties.

A. Divisions

This hazard class has no divisions.

5.1.4 Other Types of Hazardous Materials

5.1.4.1 Consumer Commodity ORM-D

- A. ORM-D stands for Other Regulated Materials and is not an acceptable classification for air transportation. These materials are packaged and intended for resale to individuals for personal or household use. All shipments offered for transportation by air that are classified as ORM-D must be refused and the shipper required to conform to the requirements of 49 CFR 171-180.
- B. Consumer Commodities shipped by air must be categorized as ID8000, Class 9. Such shipments are not permitted on Mesa Airlines, Inc. passenger-carrying flights.

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5.2 Markings

5.2.1 Orientation Arrows

Package orientation arrows are required on packagings containing liquid hazardous materials. The arrows must be legibly marked on two opposite vertical sides of the package and be pointing in the correct upright position.

5.2.2 Handling Labels

Handling labels are designed to provide additional information on the safe transportation of a material(s) to those who may transport the material. Some examples of these types of labels include orientation arrows, magnetized materials and “Cargo Aircraft” only labels. [Refer to Appendix A: "Hazardous Materials Markings, Labeling and Placarding Guide"](#).

5.2.3 Keep Away From Heat Label

A package bearing a “KEEP AWAY FROM HEAT” handling marking must be protected from direct sunshine and stored in a cool and ventilated place, away from sources of heat.

5.2.4 Magnetized Materials

Magnetized material, as defined in 49 CFR, with a gauss reading of more than 0.00525 is forbidden for air transportation and a package with a reading of 0.00525 or less is not regulated. Packages or containers with magnetized material are not permitted on any passenger-carrying aircraft operated by Mesa Airlines, Inc. and must conform to the requirements in [Chapter 7: "Cargo Only Carriage"](#).

5.2.5 Cargo Aircraft Only

Certain materials pose such a significant safety risk that they are limited to cargo-only aircraft. These materials will display a Cargo Aircraft Only label in addition to the DOT Hazard Class Label specific to the material. Packages or containers bearing this label are not permitted on any passenger-carrying aircraft operated by Mesa Airlines, Inc. and must conform to the requirements in [Chapter 7: "Cargo Only Carriage"](#).

5.2.6 HMIS or NFPA Labels

HMIS and NFPA labels are used to alert individuals to the dangers of chemicals. The labels usually display four categories each assigned a different color to associate a specific risk: red, fire hazard; blue, health hazard; yellow, reactivity; white, special hazard. Packages bearing either of these labels should be scrutinized to determine if the Department of Transportation regulates the product being offered for transportation.

5.3 Hidden Hazards

5.3.1 General

Personnel employed by or working on the behalf of Mesa Airlines, Inc. must be always aware that packages, baggage or containers offered for transportation may be labeled or marked incorrectly creating a possibility that they may contain hazardous materials. This section is intended to create a general awareness of these hidden hazards.

5.3.2 Examples

The following are some examples of articles that may pose a risk when transported or may contain hazardous materials. This list is not all inclusive. Any suspicion that hazardous materials may be present in a bag, package or container must be resolved prior to acceptance.

5.3.2.1 Computer Bags; Laptop Cases

May contain spare lithium-ion batteries for electronic devices. These spare batteries must be removed and kept with the passenger in the cabin in accordance with the procedures described herein if the bag is traveling in the cargo pit.

5.3.2.2 Gas Powered Equipment; Automobile Parts

May contain residual chemicals including fuel and/or oil. The presence of residual or vaporous chemicals renders the article a hazardous material.

5.3.2.3 Camping Gear

May contain flammable gas, flammable liquid, matches or other hazardous materials.

5.3.2.4 Ice Chests; Coolers

May contain dry ice (solid carbon dioxide).

5.3.2.5 Self-Heating Meals; Meals Ready to Eat (MRE)

May contain substances that are considered hazardous materials.

5.3.2.6 Electrically Powered Equipment; Electrical Equipment

May contain magnetized materials or mercury in switch gear and electron tubes. Electrical equipment may be powered by a wet cell battery.

5.3.2.7 Household Goods

May themselves be regulated or may contain substances that are considered hazardous materials.

5.3.2.8 Photography Equipment

May contain dangerous chemicals



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5.3.2.9 Tool Boxes

May contain explosives (power rivets), compressed gases or aerosols, flammable gases (butane cylinders), flammable adhesives, paints or corrosive liquids. Tool boxes offered for transportation must be inspected prior to acceptance in order to determine if they contain any hazardous materials.

5.3.2.10 Speakers

May contain magnets which are considered to be hazardous material.

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Chapter 6: Passenger Only Carriage

6.1 Scope

A. The policy and procedures outlined in this chapter apply to the Mesa Airlines, Inc. passenger codeshare operations for:

1. United Airlines

NOTE

For cargo-only operations, [refer to Chapter 7](#).

B. This chapter contains the hazardous materials which Mesa Airlines, Inc. is certified to carry, the respective allowable quantities, acceptance and transportation limitations and requirements as well as the procedures to transport those hazardous materials aboard passenger-carrying aircraft operated by Mesa Airlines, Inc.

C. The provisions, excepted materials and respective limitations approved for carriage in this chapter will apply to all Mesa Airlines, Inc. crewmembers for all passenger and cargo aircraft operations, unless expressly prohibited herein.

6.1.1 Definition of Acceptance

6.1.1.1 Cargo Shipments

Cargo shipments are accepted by an air carrier when a shipment is presented and the transfer of the shipment and the air waybill are completed with no further exchange between the shipper and the air carrier.

6.1.1.2 Checked Baggage

Checked baggage is accepted when the air carrier has issued a baggage claim ticket and has taken possession of the baggage, meaning the customer will not have additional contact with the checked bag until it has been offloaded at the destination point and returned to the passenger.

6.1.1.3 Carry-on Baggage

Carry-on baggage is accepted by an air carrier when the airline accepts the boarding pass of the passenger while boarding the aircraft.

6.2 General Procedures

6.2.1 Validation

When baggage or cargo is suspected of containing hazardous materials prior to acceptance, the existence of hazardous materials and the materials conformance to the relevant policies of this manual, and all appropriate regulations, must be validated.

6.2.1.1 Procedure

- A. Question the shipper or passenger as to the contents of the package or container in a professional and courteous manner. Questions should be direct and specific in order to determine the contents of the package or container.
- B. If the shipper's or passenger's responses to questioning cannot conclusively determine the contents of a package or container, a visual inspection of the contents must be made with the shipper or passenger present.
- C. Packages or containers that are found to contain hazardous materials will be subject and must conform to the requirements of this manual as a condition for acceptance.
- D. Packages or containers that are found not to contain hazardous materials will be accepted for transportation as long as the article does not indicate that it contains hazardous materials by markings or otherwise.
- E. If the shipper or passenger refuses to disclose the contents of the package or container or allow a visual inspection of the contents, the package or container must be refused.
- F. If there is still doubt as to whether the material may be transported by air, personnel are encouraged to contact the Verisk 3E 24-hour hotline at (800) 451-8346.

6.2.2 Inspection

No hazardous material may be accepted or loaded aboard an aircraft operated by Mesa Airlines, Inc. unless it has been inspected and found to meet the requirements for acceptance located in this manual and the package complies with federal Hazardous Materials Regulations.

6.2.2.1 Procedure

- A. Each package must be checked to ensure that the package has no holes, leakage or other indication that its integrity has been compromised.
- B. The inspection procedure will occur first prior to acceptance, prior to loading the package or container, and again when offloaded.
- C. If the package is found to be damaged or its integrity compromised prior to acceptance, it must be refused for transportation.
- D. If the package is found to be damaged or its integrity compromised at any time after acceptance by Mesa Airlines, Inc., the procedures for damaged shipments must be followed. [Refer to Chapter 4: "Emergency Procedures"](#).

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6.2.3 General Transportation Requirements

- A. It is the responsibility of each person loading a hazardous material aboard an aircraft operated by Mesa Airlines, Inc. to verify, prior to loading, that the material and packaging conforms to the requirements of Mesa Airlines, Inc. and federal hazardous materials regulations.
- B. A package containing hazardous materials marked “THIS SIDE UP” or “THIS END UP” or with arrows to indicate the proper orientation of the package must be loaded aboard an aircraft in accordance with such markings. Any package bearing the marking “CARGO AIRCRAFT ONLY” is never permitted to be loaded or carried on any Mesa Airlines, Inc. passenger-carrying aircraft.
- C. Packages must be loaded in a manner that provides for separation and segregation. Packages must be loaded to prevent interaction with incompatible items and in a way that prevents movement that could change the orientation of the packages during the normal flight process. Proper loading must be utilized to prevent a spill or leak, or any potential damage to the package containing hazardous materials.

6.2.4 Notification to Pilot-In-Command

MISC 49 CFR 175.33

NOTE

For vendor personnel completing a Notification to Pilot-In-Command, refer to the appropriate codeshare procedures, as described in [1.2.5 "Codeshare Partner Manuals"](#).

- A. For the limited hazardous materials permitted for transport on Mesa Airlines, Inc. passenger aircraft that require a Notification to Pilot-In-Command/Captain (NOTOC), agents will use a pilot notification form to alert the flight crew as to the location and type of hazardous material that is being loaded onto the aircraft. This form will most commonly be used for cargo shipments containing dry ice. Mesa Airlines, Inc. uses Form #HM-001, found in [Appendix A](#). Codeshare approved Notification to Pilot-In-Command forms may be used for Mesa Airlines, Inc. flights operated on behalf of that codeshare. These forms meet or exceed the content requirements of the Mesa Airlines, Inc form.
- B. When the flight crew reviews any NOTOC, the PIC must review the contents to ensure that all shipments are within the limits permitted by Mesa Airlines, Inc. Any discrepancies must either be resolved or the suspect package removed from the aircraft with the lead ramp agent, prior acceptance of the NOTOC and departure of the aircraft.
- C. Instructions for Completing the Pilot Notification Form:
 - 1. Fill out the IATA airport code for the originating and destination stations.
 - 2. Fill out at least one Flight and Date box for a non-stop flight or additional boxes for down-line connections.
 - 3. The agent who loads the hazardous materials on the aircraft will confirm that no damaged or leaking packages have been loaded on the aircraft and sign their name and employee badge number on the line next to the corresponding flight/date.

4. Fill out the number of packages, proper shipping name, hazard class, UN number, packing group, weight and location for the hazardous materials under the shaded boxes.

NOTE

Per 49 CFR 175.33(a)(6), if shipping the same hazardous material (the same proper shipping name and identification number) in multiple packages, list the total quantity loaded in the Pilot NOTOC Form table, then notate the quantity contained in the smallest and the largest package loaded into each cargo pit in the “notes” section.

5. If an air waybill number is issued for the shipment containing Hazardous Materials, the air waybill number must be listed in the “notes” section of the Pilot Notification Form.
6. Complete the Shippers Declaration box by filling out the name of the shipper, phone number of shipper, signature of shipper, date signed and Emergency Response information, if applicable.
7. A copy of the NOTOC will be provided to the PIC and the PIC must verify that the shipments containing hazardous materials are approved for transport, properly segregated and within the limits described herein. Once verification is made that the materials are within the operational limits set forth by this manual, the PIC will affix their signature to the NOTOC. A final copy of the signed NOTOC must be retained by the departure station in accordance with codeshare procedures for 90 days.

NOTE

[Refer to Appendix A: "Forms"](#) for the Pilot Notification Form (#HM-001). Dangerous Goods information notated on NOTOC or CLR must be readily available to SOC upon request to the station in the event of emergencies.

- D. The NOTOC must be retained by station personnel at the departure airport for 90 days past the date on the NOTOC. Filed Notification to Pilot-In-Command must be made available to Mesa Airlines, Inc. personnel or government officials upon request.
- E. On arrival, if the NOTOC was completed manually, the flight crew must provide their copy of the NOTOC to the ramp personnel unloading the aircraft to ensure they are made aware to the presence of hazardous materials. The flight crew should inform the arrival station of the presence of hazardous materials on the inbound radio call, when applicable.

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6.2.5 Discrepancies

- A. If at any time following acceptance it is discovered that a hazardous material does not meet the acceptance provisions and/or the provisions for transportation, a Hazardous Materials Discrepancy Report must be completed as soon as practical. [Refer to Chapter 8: "Irregularities"](#) for more information on completing a discrepancy report.
- B. Should the discovery take place after the item has been loaded and the aircraft departed, Mesa Airlines, Inc. System Operations Control must be notified immediately.
- C. The Mesa Airlines, Inc. Senior Vice President of Flight Operations (Director of Operations) will ensure that flight crewmembers will be notified through the Dispatch office or air traffic control (ATC) while in-flight of any and all potential danger.

6.3 Refusal

6.3.1 General

- A. Any hazardous materials that are not permitted for transportation by Mesa Airlines, Inc. including baggage, packages or containers wherein such hazardous materials are present or when such packages or containers do not conform to federal hazardous materials regulations, will be refused.
- B. All station personnel will follow the respective codeshare procedure for notifying passengers if issues with acceptance or carriage of their baggage arise. [Refer to 1.2.5 "Codeshare Partner Manuals"](#).
- C. Flight crewmembers should resolve any discrepancies with hazardous materials shipments prior to accepting them for transportation and loading on Mesa Airlines, Inc. aircraft. Crewmembers should interface with the ramp personnel and follow established codeshare procedures for rejecting or refusing shipments.

6.3.2 Responsibility

- A. The shipper or passenger who offered the bag, package or container in question is responsible for ensuring the safe disposal or alternate transportation of refused hazardous materials.
- B. Persons employed by or acting on the behalf of Mesa Airlines, Inc. will not coordinate the shipment of refused hazardous materials through the US Mail or any other carrier on the passenger's or shipper's behalf or attempt to alter the material or packaging to meet regulations.
- C. It is the responsibility of carriers interlining hazardous materials shipments to Mesa Airlines, Inc. to ensure that the shipment conforms to the requirements of this manual.

6.3.3 Procedure

- A. When it has been determined that the hazardous material offered cannot be transported, the passenger or shipper will be advised of the reason why the material cannot be accepted, and the shipper must take possession and remove the shipment accordingly.

CAUTION

Refused hazardous materials must not be disposed of in regular trash containers.

- B. If a hazardous material is received via interline from another carrier that does not conform to the requirements of this manual, persons employed by or acting on the behalf of Mesa Airlines, Inc. will not accept the interline shipment and will notify the interlining carrier that the shipment is not acceptable for transportation. Follow the codeshare partner policies and procedures for rejecting and isolating the shipment from further travel until the shipment's safe transportation can be arranged, or if required, the shipper can be contacted to make the required arrangements for retrieval and subsequent disposal of the non-compliant shipment.
- C. If a shipment is refused or rejected, it may require further reporting. [Refer to Chapter 8: "Irregularities"](#) for more information on events that require reporting.

6.4 Dry Ice

MISC 49 CFR 173.217 49 CFR 175.8(b)(2) 49 CFR 175.10 49 CFR 175.900

6.4.1 General

Dry ice is normally used to cool other items contained with it. Prior to acceptance, personnel must ensure that the dry ice does not contain another hazardous material which may negatively interact with it and present a risk to its safe transportation.

6.4.2 Carriage

- A. Dry ice may be carried as checked baggage, carry-on baggage and as cargo.
- B. On select flights, dry ice in the form of small discs may be used onboard the aircraft by the flight attendants to store food or drink items (49 CFR 175.8(b)(2)). This dry ice does not need to be accounted for on the cargo load report or pilot notification form. It may be disposed of in the trash at the end of the flight (during the ground crew catering process). Do not dispose of unsealed dry ice in the trash to prevent liquid from interacting with the dry ice and causing fog.

6.4.3 Quantity

- A. Each passenger may not transport more than 5.5 lbs (2.5 kg) of dry ice per carry-on baggage.
- B. Each passenger may not transport more than 5.5 lbs (2.5 kg) of dry ice per checked baggage.
- C. Passenger-carrying aircraft may carry no more than 441 lbs total of all dry ice loaded in all cargo compartments.

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- D. Dry ice in quantities up to 50 lbs may be accepted in medical shipments.

NOTE

Refer to the applicable codeshare manuals for carrier specific dry ice maximum allowable quantities. For United Express, the *Regional Ground Operations Manual*.

6.4.4 Packaging

- A. The container must be designed and constructed to permit the release of carbon dioxide gas to prevent a build-up of pressure that could rupture the packaging.
- B. When transported as checked baggage, the package must have the following information clearly marked on the package:
1. "DRY ICE" or "CARBON DIOXIDE, SOLID."
 2. The name of the contents being cooled.
 3. The net (total) weight of the dry ice.

NOTE

Storage of CO₂ in the cargo hold of aircraft may allow significant concentration of CO₂ in the cabin. CO₂ is generally regarded as a simple asphyxiant, symptoms resulting only when such high concentrations are reached that there is insufficient oxygen in the atmosphere to support life. The signs and symptoms are those which precede asphyxia, namely headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears. Removal from exposure results in rapid recovery. Should these symptoms occur, the flight crew will immediately don oxygen masks, and comply with smoke and fume elimination procedures.

6.4.5 Loading Restrictions

Dry ice may not be loaded in the same compartment as live animals. The release of carbon dioxide gas will suffocate live animals loaded in the same compartment.

6.4.6 Pilot Notification

- A. For shipments containing dry ice (UN 1845, Carbon Dioxide, solid) in excess of 2.5 kg (5.5 lbs.), a Notification to Pilot-In-Command (NOTOC) is required. [Refer to "Notification to Pilot-In-Command"](#) for more information.
- B. For shipments of dry ice, the information required on the NOTOC may be replaced by the UN number, proper shipping name, hazard class, total quantity in each cargo compartment aboard the aircraft, and the airport at which the package(s) is to be unloaded.

6.5 Oxygen Bottle; Scuba Tank

6.5.1 General

- A. Oxygen tanks which are ENTIRELY DEPLETED of oxygen are not considered regulated materials. The following requirements do not apply to oxygen maintained by Mesa Airlines, Inc. aboard its aircraft and used in the event of emergencies.
- B. While devices such as ventilators, nebulizers and sleep apnea monitors are not considered hazardous materials and may be carried onboard the aircraft, oxygen generators CANNOT be accepted for transport on passenger-carrying aircraft. Oxygen generators are different from Portable Oxygen Concentrators (POC), which are permitted to be carried and used on Mesa Airlines, Inc. aircraft, in accordance with the policies listed within this chapter.

NOTE

[Refer to "Portable Oxygen Concentrators"](#) for more information.

6.5.2 Carriage

Oxygen bottles and scuba tanks that conform to the requirements listed below may be carried as checked baggage or cargo only.

6.5.3 Disposition

- A. Oxygen bottles and scuba tanks must be completely depleted of all oxygen.
- B. The valve must be left open during flight.
- C. The gauge measuring oxygen placed in the bottle or tank must register zero (0).

6.5.4 Exceptions

MISC 49 CFR 175.8(b)

Company-owned oxygen bottles for passenger and crew medical use are permitted to be transported as COMAT on any Mesa Airlines, Inc. aircraft when the oxygen level in the bottle has been depleted BELOW 40 PSI or when in accordance with the provisions for acceptance above.

6.6 Blood, Tissue or Organs

Blood which has been collected for the purpose of blood transfusions and tissues or organs intended for use in transplants may be transported aboard aircraft operated by Mesa Airlines, Inc.

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6.7 UN3373 Biological Substances, Category B Shipments

6.7.1 General

An infectious substance that is not in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. This includes Category B infectious substances transported for diagnostic or investigational purposes. A Category B infectious substance must be described as “Biological substance, Category B” and assigned identification number UN3373. This does not include regulated medical waste.

6.7.2 Carriage

UN3373 Category B may be accepted for transport on Mesa Airlines, Inc. aircraft as cargo only in accordance with 49 CFR 172.101. The total maximum quantity permitted onboard any aircraft is 4 L or 4 kg.

NOTE

Mesa Airlines, Inc. will NOT accept for carriage any substance classified as category A (infectious Substances, affecting humans or animals).

NOTE

Blood, Blood Products, Cord Blood, Plasma, Plasma Derivatives, Blood Components, Tissues or organs intended for use in transplant operations; and human cells, tissues and cellular and tissue-based products are excepted from the Hazmat Regulations. Therefore, shippers may offer items described as these things and not UN3373, Biological Substances, Category B. However, if any of these items are packaged in dry ice to keep them cool dry ice is classified as a Dangerous Good.

6.7.3 Packaging

MISC 49 CFR 173.199

- A. A Category B infectious substance must be packaged in a triple packaging consisting of a primary receptacle, a secondary packaging, and a rigid outer packaging.
- B. Primary receptacles must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging.
- C. Secondary packagings must be secured in rigid outer packagings with suitable cushioning material such that any leakage of the contents will not impair the protective properties of the cushioning material or the outer packaging.

- D. The following square-on-point mark must be displayed on the outer packaging on a background of contrasting color. The width of the line forming the border must be at least 2 mm (0.08 inches) and the letters and numbers must be at least 6 mm (0.24 inches) high. The size of the mark must be such that no side of the diamond is less than 50 mm (1.97 inches) in length as measured from the outside of the lines forming the border.



- E. The proper shipping name “Biological substances, Category B” must be marked on the outer packaging adjacent to the diamond-shaped mark in letters that are at least 6 mm (0.24 inches) high.
- F. Emergency contact name and telephone number must be marked on the package or air waybill.

NOTE

In accordance with 49CFR 172.200 and 173.199, a NOTOC is not required for UN3373, Category B unless it is packed in dry ice.

6.8 Alcoholic Beverages

MISC 49 CFR 175.10(A)(4)

6.8.1 General

- A. Alcoholic beverages that do not exceed 24% alcohol by volume are not considered regulated materials, and there are no federally mandated restrictions on their carriage.
- B. Alcoholic beverages that are between 24% and 70% alcohol by volume are regulated materials and must conform to the requirements of this section.
- C. All alcoholic beverages that exceed 70% alcohol by volume, unmarked alcoholic beverages and flasks must be refused.

6.8.2 Carriage

Passengers may carry alcoholic beverages as checked or carry-on baggage; however, passengers are not permitted to consume their own alcohol onboard.

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6.8.3 Quantity

Each passenger may carry up to a maximum net total less than 5 liters (1.3 gallons) of alcoholic beverages in their checked or carry-on baggage.

6.8.4 Packaging

- A. Alcoholic beverages regulated by this section must be packaged in the manufacturer's unopened retail packaging.
- B. The package or container must not appear to be damaged, leaking and/or incapable of satisfactorily containing the material during the course of normal handling and transportation.

6.9 Aircraft Tires

MISC 49 CFR 175.8 (B)(4)

6.9.1 Carriage

Aircraft tires may be transported as cargo only in accordance with the requirements of this section. Aircraft tires are permitted to be transported as COMAT on any Mesa Airlines, Inc. aircraft.

6.9.2 Disposition

- A. The tire must not exceed the maximum rated service pressure. The rated service pressure can typically be found on the side of the tire measured in PSI.
- B. If a gauge is not available to verify the tire pressure, it will be completely depleted prior to acceptance.
- C. Valve assemblies must be protected from damage during transport. A tire or tire assembly which is unserviceable or damaged is forbidden from transport by air, unless the tire has been fully depleted and no longer contains any gas or material meeting the definition of a hazardous material.

6.9.3 Allowances

- A. The aircraft tire of another carrier may be transported aboard Mesa Airlines, Inc. operated flights only when the disposition of the tire is compliant with the requirements of this paragraph prior to carriage.
- B. Tires for ground equipment are not considered hazardous materials and are not regulated.

6.10 Acceptance of Wheelchair/Mobility Aids

MISC 49 CFR 175.10(a)(15) 49 CFR 175.10(a)(16) 49 CFR 175.10(a)(17)

Battery-powered wheelchairs/mobility aids can be accepted as checked baggage. Wheelchairs/mobility aids will NOT be transported if exhibiting evidence of previous leakage or damage. Wheelchair batteries are classified as Non-Spillable, Spillable, Dry Sealed or Lithium-Ion Powered. Specific information related to the handling requirements for each type of battery are listed below.

NOTE

This section also applies to any SEGWAY devices used specifically as a mobility aide.

6.10.1 Non-Spillable and Dry Sealed Batteries in a Wheelchair/Mobility Aid

Non-Spillable (wet – electric storage) batteries and batteries, dry, sealed, n.o.s. (commonly referred to as dry batteries including both non-rechargeable types (sometimes called alkaline batteries)) and rechargeable types (nickel metal hydride and nickel cadmium), may be accepted for transport with the battery attached when properly prepared for shipment provided:

- A. A visual inspection including removal of the battery, where necessary, reveals no obvious defects.
- B. The wheelchair or mobility aid design provides an effective means of preventing unintentional activation (e.g., packaging restricts access to activation switch, switch caps or locks, recessed switches, trigger locks, temperature sensitive circuit breakers, etc.).
- C. The battery must be securely attached to the wheelchair/mobility aid and loaded, stowed, secured and unloaded in an upright position. If this cannot be accomplished, the battery must be removed and handled, [refer to "Battery Removal"](#) outlined procedures.
- D. If removal of the non-spillable battery is required for any other reason, [refer to "Battery Removal"](#) handling procedures.

6.10.2 Spillable Batteries in a Wheelchair/Mobility Aid

Spillable batteries may be accepted as checked baggage for transport with the battery attached when properly prepared for shipment as follows:

- A. A visual inspection must not reveal any obvious defects.
- B. The battery must be disconnected and terminal end cables insulated to prevent short circuits.
- C. The Pilot-In-Command (PIC) must be advised either orally or in writing prior to departure as to the location of the spillable battery aboard the aircraft.
- D. The battery must be securely attached to the wheelchair/mobility aid.
- E. The wheelchair/mobility aid must be loaded, stowed, secured and unloaded in an upright position (if this cannot be accomplished the battery must be removed).
- F. If removal of the spillable battery is required, [refer to "Battery Removal"](#) handling procedures.

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6.10.3 Lithium-Ion Battery in a Wheelchair/Mobility Aid

When a lithium ion battery-powered wheelchair or other mobility aid is specifically designed to allow its battery to be removed by the user (e.g., collapsible), the battery **must** be removed and handled, [refer to "Battery Removal"](#) outlined procedures. Otherwise, the following procedures must be followed when carried as checked baggage.

- A. The lithium ion battery must be of a type that successfully passed each test in the UN Manual of Tests and Criteria as specified in 49 CFR Section 173.185, unless approved by the Associate Administrator.
- B. A visual inspection must not reveal any obvious defects.
- C. The battery terminals are protected from short circuits (e.g., enclosed within a battery housing).
- D. The battery must be securely attached to the mobility aid.
- E. The electrical circuits are isolated.
- F. Must be loaded and stowed in such a manner to prevent its unintentional activation (e.g., packaging restricts access to activation switch, switch caps or locks, recessed switches, trigger locks, temperature sensitive circuit breakers, etc.) and its battery must be protected from short circuiting.
- G. A maximum of one spare battery, not exceeding 300 Wh, or two spares, not exceeding 160 Wh each, may be carried. This is an exception specific to batteries for wheelchairs/mobility aids.
- H. Must be protected from damage by the movement of baggage, mail, service items or other cargo.
- I. The Pilot-In-Command (PIC) is advised either orally or in writing, prior to departure, as to the location of the lithium ion battery or batteries aboard the aircraft.

6.10.4 Battery Removal

If a battery (Non-Spillable, Dry Sealed, Lithium-Ion or Spillable) is removed from the wheelchair/mobility aid, the removal should be performed by qualified airline personnel only. Each type of battery must be handled as follows:

6.10.4.1 Non-Spillable Battery

Battery is disconnected and the battery terminals are protected to prevent short circuit. Battery must be placed in a strong, rigid packaging marked "NON-SPILLABLE BATTERY" (unless fully enclosed in a rigid housing that is properly marked).

6.10.4.2 Dry Sealed Battery

Battery is disconnected and the battery terminals are protected to prevent short circuit. The battery is removed and placed in a strong, rigid packaging material marked with the words "NOT RESTRICTED."

6.10.4.3 Lithium-Ion

- A. The battery must be removed from the wheelchair/mobility aid according to the instructions provided by the wheelchair or other mobility aid owner or its manufacturer.
- B. The battery must be carried in carry-on baggage only.
- C. Battery terminals must be protected from short circuits by placement in original retail packaging or otherwise insulating the terminal (e.g., by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).
- D. The battery must not exceed 300 Watt-hour (Wh).
- E. A maximum of one spare battery not exceeding 300 Wh or two spares not exceeding 160 Wh each may be carried.
- F. The Pilot-In-Command (PIC) is advised either orally or in writing, prior to departure, as to the location of the lithium ion battery or batteries aboard the aircraft.

6.10.4.4 Spillable Batteries

- A. Battery is removed and placed in strong rigid packaging.
- B. The packaging must be leak-tight and impervious to battery fluid. An inner liner may be used to satisfy this requirement if there is absorbent material placed inside of the liner and the liner has a leak proof closure.
- C. The battery must be protected against short circuits, secured upright in the packaging, and be packaged with enough compatible absorbent material to completely absorb liquid contents in the event or rupture of the battery.
- D. The packaging must be labeled with a "CORROSIVE" label, marked to indicate proper orientation and marked with the words "BATTERY, WET, WITH WHEELCHAIR."
- E. The Pilot-In-Command (PIC) must be advised either orally or in writing prior to departure as to the location of the spillable battery aboard the aircraft.

6.10.5 Pilot Notification

The Pilot-In-Command must be notified of the presence and location of electric batteries loaded on the aircraft using the applicable load sheet.

6.10.6 Notification of Incidents

A battery related incident involving fire, violent rupture, explosion or dangerous evolution of heat requires an incident report, [refer to Chapter 8: "Irregularities"](#). Refer to this section for details on who to contact and how to fill out the report.

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6.11 Carbon Dioxide Gas Cylinders and Cartridges

MISC 49 CFR 175.10(a)(11) 49 CFR 175.10(a)(12)

6.11.1 Quantity

- A. Carbon dioxide gas cylinders (containing no hazardous material other than a Division 2.2 gas) worn by passengers for the operation of mechanical limbs and spare cylinders of a similar size for the same purpose may be accepted in sufficient quantities to ensure an adequate supply for the duration of the journey. These items can be transported in both carry-on and checked baggage.
- B. A self-inflating life jacket fitted with no more than two small gas cartridges (containing no hazardous material other than a Division 2.2 gas) for inflation purposes plus no more than two spare cartridges. The life jacket and spare cartridges may be carried in carry-on or checked baggage and must be packaged in such a manner that they cannot be accidentally activated.

6.12 Hydrocarbon Gas Hair Curlers

MISC 49 CFR 175.10(a)(6)

6.12.1 Carriage

- A. No more than one per passenger or crewmember, which must be carried in the cabin in a carry-on bag is allowed. These items are not permitted in checked baggage or in any bag placed in the cargo pit.
- B. Gas refills for such curlers are not permitted in checked or carry-on baggage.

6.12.2 Disposition

The safety cover must be securely fitted over the heating element.

6.13 Medicinal, Toiletry and Personal Use Articles

MISC 49 CFR 175.10(a)(1)

6.13.1 General

Non-radioactive medicinal and toiletry articles and other regulated personal use items may be accepted for transport as checked baggage aboard an aircraft operated by Mesa Airlines, Inc. only when they conform to the following requirements.

6.13.2 Carriage

- A. Non-radioactive medicinal and toilet articles for personal use (including aerosols) may be carried in carry-on and checked baggage. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release.
- B. Other aerosols in Div. 2.2 (nonflammable gas) with no subsidiary risk can be carried in checked baggage only. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release.

6.13.3 Quantity

- A. Medicinal, toiletry and personal use articles may not exceed 18 ounces (0.5 kg) by mass or 17 fluid ounces (500 mL) per container.
- B. Medicinal, toiletry and personal use articles may not exceed 70 ounces (2 kg) by mass or 68 fluid ounces (2 liters) per person.

6.13.4 Other Personal Items

6.13.4.1 Self-Defense Sprays

MISC 49 CFR 175.10(a)(9)

- A. Self-defense sprays may ONLY be carried in checked baggage.
- B. Each passenger may transport one self-defense spray not exceeding four fluid ounces (118 mL) only.
- C. Self-defense sprays must incorporate a positive means to prevent accidental discharge (i.e., lock or safety connection).

6.13.4.2 Safety Matches and Lighters

MISC 49 CFR 175.10(a)(2)

One packet of safety matches or a lighter intended for use by an individual when carried on one's person or in carry-on baggage only. Lighter fuel, lighter refills and lighters containing unabsorbed liquid fuel (other than liquefied gas) are not permitted on one's person or in carry-on or checked baggage.

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6.14 Ammunition

MISC 49 CFR 175.10(a)(8)

6.14.1 General

Firearms which are unloaded and have no residual explosive residue are not considered regulated materials; however, the transportation of firearms aboard an aircraft operated by Mesa Airlines, Inc. must conform to the provisions of the Mesa Airlines, Inc. *General Operations Manual* (Manual #410).

6.14.2 Carriage

Firearms and ammunition may be transported as checked baggage only.

6.14.3 Quantity

- A. Each container may hold no more than 11 lbs of ammunition.
- B. Each passenger may transport no more than 11 lbs of ammunition.
- C. The maximum amount of ammunition that may be carried on a Mesa Airlines, Inc. passenger-carrying aircraft at one time is 110 lbs.

6.14.4 Packaging

Ammunition must be packed in wood, fiber, metal or other packaging specifically designed to carry small amounts of ammunition. Ammunition clips and magazines must also be securely boxed or packaged.

6.14.5 Exceptions

Passengers that qualify for exceptions under 49 CFR 1544.219 are permitted onboard Mesa Airlines, Inc. aircraft with required ammunition and must comply with the requirements in the Mesa Airlines, Inc. *General Operations Manual* (Manual #410) for "Carriage of Accessible Weapons".

6.15 COMAT

[Refer to "Hazmat Build Up Preparation / COMAT"](#) for the policies to follow regarding COMAT shipments containing hazardous materials

6.16 Portable Oxygen Concentrators

14 CFR: 121.574

6.16.1 General

A Portable Oxygen Concentrator (POC) is a medical device which separate oxygen from nitrogen, and other gases contained in the air, and dispenses it in concentrated form to the user. A POC does not contain compressed gases or chemicals to generate oxygen.

6.16.2 Approved Models

- A. Except the POC model types listed specifically in this section, all POCs that satisfy the FAA's acceptance criteria bear a label stating: "The manufacturer of this POC has determined this device conforms to all applicable FAA acceptance criteria for POC carriage and use on board aircraft." An example of this label is below. Any POC with this label is permitted to be used on Mesa Airlines, Inc. aircraft in accordance with the policies of this section.

The manufacturer of this POC has determined this device conforms to all applicable FAA acceptance criteria for POC carriage and use on board aircraft.

- B. The following models were specifically approved for use by the FAA:
1. AirSep Focus;
 2. AirSep FreeStyle;
 3. AirSep FreeStyle 5;
 4. AirSep LifeStyle;
 5. Delphi RS-00400;
 6. DeVilbiss Healthcare iGo;
 7. Inogen One;
 8. Inogen One G2;
 9. Inogen One G3;
 10. Inova Labs LifeChoice;
 11. Inova Labs LifeChoice Activox;
 12. International Biophysics LifeChoice;
 13. Invacare Solo2;
 14. Invacare XPO2;

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15. Oxlife Independence Oxygen Concentrator;
16. Oxus RS-00400;
17. Precision Medical EasyPulse;
18. Respironics EverGo;
19. Respironics SimplyGo;
20. SeQual Eclipse;
21. SeQual eQuinox Oxygen System (model 4000);
22. SeQual Oxywell Oxygen System (model 4000);
23. SeQual SAROS; and
24. VBox Trooper Oxygen Concentrator.

6.16.3 Requirements for Carriage

- A. The user must be capable of hearing the unit's alarms, seeing the alarm light indicators, and have the cognitive ability to take the appropriate action in response to the various caution and warning alarms and alarm light indicators, or be traveling with someone who is capable of performing those functions.
- B. The user must ensure that the portable oxygen concentrator is free of oil, grease or other petroleum products and is in good condition, free from damage or other signs of excessive wear or abuse.
- C. The user must inform Mesa Airlines, Inc. that the passenger intends to use a portable oxygen concentrator on board the aircraft and must allow the crew of the aircraft to examine the device.
- D. If there is reasonable doubt that the individual can complete the flight safely without requiring extraordinary medical assistance during the flight, the PIC may request a physician's statement from the passenger declaring their fitness to fly with the device.
- E. Only lotions or salves that are oxygen approved may be used by persons using the portable oxygen concentrator device.
- F. The user must carry on the flight a sufficient number of batteries to power the device for the duration of the oxygen use specified in the user's physician statement, including a conservative estimate of any unanticipated delays.

6.16.4 Carriage

- A. These units may be carried aboard, transported, and used in the cabin of Mesa Airlines, Inc. aircraft under certain and specific conditions (refer to the Mesa Airlines, Inc. *Carry-On Program* for specific information).
- B. The Pilot-In-Command (PIC) must be notified whenever a passenger brings and intends to use a portable oxygen concentrator on board the aircraft. This may be accomplished verbally or in writing. Gate personnel will notify the flight attendant and/or the PIC directly. It is the responsibility of the PIC to ensure that any passenger needing a POC onboard also meets the criteria for passenger transport, as described in the Mesa Airlines, Inc. *General Operations Manual* (Manual #410) section "Carriage of Disabled Persons."

6.16.5 Disposition

- A. The user must ensure that all portable oxygen concentrator batteries carried onboard the aircraft in carry-on baggage are protected from short circuit and are packaged in a manner that protects them from physical damage.
- B. Batteries protected from short circuit include:
 - 1. Those designed with recessed battery terminals.
 - 2. Those packaged so that the battery terminals do not contact metal objects (including the battery terminals of other batteries).

6.16.6 Exceptions

When a battery-powered oxygen concentrator is carried onboard aircraft as carry-on baggage and is not intended to be used during the flight, the battery must be removed and packaged separately unless the concentrator contains at least two effective protective features to prevent accidental operation during transport.

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6.17 Lithium Cell Batteries

6.17.1 General

- A. Common consumer electronics such as digital cameras, cell phones, and most notebook computers containing lithium cell batteries are still allowed in carry-on and checked luggage, although restrictions apply. Most lithium-ion cell phone and standard notebook computer batteries are below 100 watt hours.
- B. Batteries not installed in electronic devices, also known as “spare batteries,” are not permitted in checked baggage. The rule limits passengers to not more than two spare rechargeable lithium-ion batteries in carry-on baggage. Spare lithium batteries must be individually protected to prevent short circuits (e.g., by placement in original retail packaging, by otherwise insulating terminals by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch). This applies to batteries that exceed 100 watt hours and less than 160 watt hours. Batteries with more than 160 watt hours are not allowed in either checked or carry-on baggage. Refer to the table in this section to accurately determine how and where a passenger may store lithium cell batteries. Each installed or spare lithium battery must be of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, Sub-section 38.3.

NOTE

[Refer to "Acceptance of Wheelchair/Mobility Aids"](#) for exceptions on watt hour ratings of lithium-ion batteries that power mobility aids.

- C. Any suitcase, roller-board, backpack, etc. that has a lithium battery powered power-bank installed is considered a “Smart” bag. Smart bags with installed lithium batteries are required to have their battery removed by the passenger in order to permit the bag for travel onboard. In the event the battery is not removable from the bag, the bag must be refused.

6.17.2 Lithium-Ion Batteries and E-Cigarettes

- A. Lithium-Ion Batteries not installed in electronic devices and e-cigarettes are not permitted in checked baggage.
- B. Flight Attendant Procedures for Gate Checked Baggage
 1. Ask the customer if the bag contains any batteries, e-cigarettes or electronics.
 2. Allow the passenger to remove the items and keep in the cabin.
 3. Assist in finding a place for the items removed. If batteries were removed, be sure to stow them so that the battery terminals are insulated by isolating the batteries from contact with other batteries and metal. Wrap them in a plastic bag to avoid contact with other batteries or metal. Do not permit a loose battery to come in contact with metal objects, such as coins, keys or jewelry.

C. Gate Procedures for Gate Checked Baggage

1. Ask the customer if the bag contains any batteries, e-cigarettes or electronics.
2. If the customer answers “yes,” advise the items must be carried with them in the passenger cabin. Ensure all loose batteries are properly packaged.

CAUTION

Carry-on baggage containing lithium-ion batteries to include e-cigarettes which do not fit in the cabin must never be moved to the cargo compartment.

3. Refer to the following table to accurately determine how and where a passenger may store lithium cell batteries.

6.17.3 Quick Reference Chart

GUIDE TO RULES EFFECTIVE OCTOBER 13, 2014		
Type of Battery/Batteries	In Checked Baggage	In Carry-on Baggage
Lithium Metal Battery, Installed in a Device (up to 2 grams lithium)	Permitted ¹	Recommended ¹
Spare Lithium Metal Battery, Not Installed in a Device (up to 2 grams lithium)	Forbidden	Permitted in carry-on baggage ²
Lithium Metal Battery, Spare or Installed (over 2 grams lithium)	Forbidden	Forbidden
Lithium-Ion Battery, Installed in a Device (up to 100 watt hours)	Permitted ¹	Recommended ¹
Spare Lithium-Ion Battery, Not Installed in a Device (up to 100 watt hours)	Forbidden	Permitted in carry-on baggage ²
“Special Case” Up to 2 Lithium-Ion Batteries, Spare or Installed (between 100 and 160 watt hours)	Spare Batteries: Forbidden Installed in Devices: Permitted ¹	Spare Batteries: Permitted ² Installed in Devices: Permitted ¹
¹ Although some devices and installed batteries may be carried in checked baggage, carrying them in carry-on baggage, when practicable, is preferred. In checked baggage, ensure that devices remain switched off, either by built-in switch/trigger locks, by taping the activation switch in the “off” position, or by other appropriate measures.		
² Be sure to take protective measures to prevent against short circuits.		

NOTE

The rule limits passengers to not more than two spare rechargeable lithium-ion batteries in carry-on baggage. This applies to batteries that exceed 100 watt and less than 160 watt hours. Batteries with more than 160 watt hours are not allowed in either checked or carry-on baggage.

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6.17.4 Notification of Incidents

A battery related incident involving fire, violent rupture, explosion or dangerous evolution of heat requires an incident report. [Refer to Chapter 8: "Irregularities"](#) for details on who to contact and the reporting requirements.

6.18 Pacemakers (Containing Radioactive Materials or Radiopharmaceuticals)

MISC 49 CFR 175.10(a)(3)

Implanted medical devices in humans or animals that contain hazardous materials, such as a heart pacemaker containing Class 7 (radioactive) material or lithium batteries and radiopharmaceuticals that have been injected or ingested, are allowed.

6.19 Thermometers and Barometers

MISC 49 CFR 175.10(a)(7) 49 CFR 175.10(a)(13)

- A. A small medical or clinical mercury thermometer for personal use, when carried in a protective case, is allowed in checked baggage only.
- B. A mercury barometer or thermometer carried by a representative of a government weather bureau or similar official agency, is allowed in carry-on baggage only. The barometer or thermometer must be in strong packaging that has a sealed inner liner or bag of strong, leak proof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package in any position. The passenger is required to disclose the presence of their instrument to the crew.

6.20 Individual Meal Packages (IMP) and Meals-Ready-to-Eat (MRE)

Meals-Ready-to-Eat (MRE) were originally developed by the military as a way of providing hot meals to soldiers in the field. The MRE contains a pre-packaged meal, together with a flameless heater. The flameless heater consists of a small pouch of iron or other metal powder and a pouch of salt water. It is these heating mechanisms that have caused concern when used on board aircraft as they produce a significant volume of hydrogen gas as part of the exothermic (heat producing) reaction. Accordingly, MRE may be carried by passengers or crew in checked or carry-on baggage, but are forbidden for use onboard aircraft.

6.21 Battery-Powered Portable Electronic Smoking Devices

Battery-powered portable electronic smoking devices (e.g., e-cigarettes, e-cigs, e-cigars, e-pipes, e-hookahs, personal vaporizers, electronic nicotine delivery systems) when carried by passengers or crewmembers for personal use must be carried on one's person or in carry-on baggage only. Spare lithium batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g., by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch). Each lithium battery must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, Sub-section 38.3. Recharging of the devices and/or the batteries onboard the aircraft is not permitted. Each battery must not exceed the following:

- A. For lithium metal batteries, a lithium content of 2 grams; or
- B. For lithium ion batteries, a Watt-hour rating of 100 Wh.

6.22 Flight Attendant Handheld Devices

If the aircraft is equipped with a Handheld Device for passenger convenience items and sales:

- A. This device is kept in the CRJ in the coat closet AC right adjacent to the lavatory, and in the forward and/or aft E-175 galleys.
- B. Flight attendants will check to be sure the handheld is properly stowed in the case.
- C. If a spare lithium battery is included, the battery must be stowed within the case in the separated slot within the case.

CAUTION

Do not store both lithium batteries in the same section within the case. this could cause a fire hazard.

END

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Chapter 7: Cargo Only Carriage

7.1 Scope

7.1.1 General

- A. The contents of this chapter apply to the Mesa Airlines, Inc. cargo only operation for flights operating on behalf of: DHL Express.

NOTE

For passenger operation carriage, [refer to Chapter 6: "Passenger Only Carriage"](#).

- B. This chapter contains the hazardous materials which Mesa Airlines, Inc. is certified to carry, the quantity, acceptance and transportation limitations and requirements as well as the procedures to transport those hazardous materials aboard cargo aircraft operated by Mesa Airlines, Inc.
- C. Mesa Airlines, Inc. operates cargo only aircraft on behalf of the respective business partner, where the business partner facilitates all ground and cargo handling personnel. All contracted ground handling and cargo acceptance personnel shall follow the respective business partner's policies and procedures for hazardous materials, as described in Chapter 1 "[Codeshare Partner Manuals](#)". The Manager of Cargo Operations, or designee, reviews and approves all changes and updates to business partner hazardous materials policies and procedures to ensure they meet or are more restrictive than the those contained herein.

7.1.2 Definition of Acceptance

Cargo shipments are accepted by an air carrier when a shipment is presented, and the transfer of the shipment and the air waybill are completed with no further exchange between the shipper and the air carrier.

7.1.3 Hazmat-Cargo Policy

No employee of or contractor working on behalf of Mesa Airlines, Inc. may accept a Hazardous Material shipment unless the material is properly described on the shipping papers, required certifications are stated in the shipping papers, the package is marked and labeled as required, and the shipment is authorized to be transported by aircraft in the condition offered. If the shipment is offered in accordance with the IATA DGR, the carrier or its agent must also assure the shipper has complied with all applicable U.S. variations to the IATA DGR. No employee or agent of Mesa Airlines, Inc. may load, or transport aboard an aircraft, any Hazardous Material unless the shipment meets the acceptance requirements, package integrity has been verified immediately before loading, and the Notification to Captain (NOTOC) has been completed. Persons offering Hazardous Material for transportation are responsible for properly identifying, describing, and classifying the material as required by 49 CFR and/or IATA standards. Those offering hazardous materials shipments are responsible for properly completing the communications and packaging requirements prior to offering the shipment for transportation.

7.2 General Procedures

7.2.1 Acceptance

- A. All cargo shipments containing hazardous materials for Mesa Airlines, Inc. cargo only operation are required to undergo an acceptance check, as described in the business partner policies and procedures. For DHL Express hazardous materials acceptance procedures and document references, see the GSAM Part B500 “Dangerous Goods”.
- B. During the acceptance process, if any shipment fails the initial inspection or does not conform to the requirements of this manual, the shipment must be rejected. [Refer to "Rejection of Non-Compliant Hazardous Materials"](#) for more information on rejection procedures. Shipments that must not be accepted include those that:
 - 1. Fail to meet the applicable hazardous materials acceptance checklist requirements (dependent on the regulations the shipment was declared under);
 - 2. Any shipment containing hazardous materials that is damaged or leaking;
 - 3. Any shipment that contains hazardous materials that are not in compliance or are not permitted for carriage onboard Mesa Airlines, Inc. aircraft, in accordance with this manual.

7.2.2 Rejection of Non-Compliant Hazardous Materials

- A. Non-compliant hazardous materials shipments must be rejected and segregated from all other cargo shipments to prevent accidental introduction into the transportation system and Mesa Airlines, Inc. aircraft. Refer to the GSAM Part B500 “Dangerous Goods” and GSAM Part F450 “Regional Variations - NORAM” for the full procedures for rejecting non-compliant hazardous materials shipments and the required documentation.
- B. If a shipment does not meet the requirements ([refer to "Acceptance"](#)), the acceptance agent will notify station leadership in accordance with local procedures and ensure:
 - 1. If the package or shipment is identified as non-complaint during the acceptance procedure, the package or shipment must be rejected and immediately returned to the shipper/offeror for appropriate disposal.
 - 2. If the package or shipment is discovered after acceptance as being non-compliant, the shipment must be segregated to prevent accidental introduction into the transportation system.
 - a. Using the supplied shipping papers, the acceptance agent will notify the listed shipper/offeror that the shipment has been rejected or is non-compliant and requires retrieval from the cargo acceptance area.
- C. Ensure the proper documentation of the shipment’s rejection, as required by the respective business partner’s policy, is retained at the station for a minimum of 1 year after the date of rejection.

Hazardous Materials Manual

7.2.3 Damaged/Leaking Shipments

- A. Damaged packages can jeopardize the safety of crewmembers, the aircraft, and staff at the airport. Under no circumstances shall hazardous materials be loaded into an aircraft whenever damage is noted or suspected. Prior to loading:
 - 1. A package or overpack containing hazardous materials to be loaded onto an aircraft or into a ULD shall be inspected to determine that it has no signs of leakage, damage, tampering, fume or other indication that the integrity of the package has been compromised and for radioactive material Type A and B that any package seal has not been broken.
 - 2. The ULDs containing hazardous materials to be loaded onto an aircraft shall be inspected for evidence of fumes, leakage, tampering or damage to any hazardous materials contained therein.
 - 3. Refer to the GSAM Part B500 “Dangerous Goods” for the full policies and procedures on inspecting ULD shipments containing hazardous materials and procedures for damaged shipments.

7.3 Hazardous Materials Approved for Mesa Airlines, Inc. Cargo Only Operations

- A. Hazardous materials are classified according to the potential danger they might cause.
- B. There are nine UN hazard classes in total. Hazardous materials can be assigned to one or more of these nine UN hazard classes (primary and secondary hazard). Some of the hazard classes are further subdivided into hazard divisions due to the wide scope of hazards within the class. An example of this is Class 1 (Explosives), which is further divided into compatibility groups to ensure safe transportation. Each compatibility group is identified by a letter.
- C. The hazardous materials classes and divisions approved for carriage onboard Mesa Airlines, Inc. cargo only aircraft are listed within this section.
- D. Items listed as “Forbidden” under the HMR table in 49 CFR 172, or in the IATA DGR, are never permitted for transport on any Mesa Airlines, Inc. aircraft under any circumstance.

7.3.1 Class 1 - Explosives

A. Definition

Articles and substances, which after ignition or initiation during transport, cause projection, fire, smoke, heat or loud noise external to the device.

B. Divisions

1. Explosives articles and substances are assigned to one of six divisions, depending on the type of hazard they present and to one of thirteen compatibility groups which identify the kinds of explosive articles and substances that are deemed to be compatible.
2. This class comprises six divisions:
 - a. 1.1 Articles and substances having a mass explosion hazard
 - b. 1.2 Articles and substances having a projection hazard but not a mass explosion hazard
 - c. 1.3 Articles and substances having a fire hazard, a minor blast hazard and/or a minor projection hazard but not a mass explosion hazard
 - d. 1.4 Articles and substances presenting no significant hazard
 - e. 1.5 Very insensitive substances having a mass explosion hazard
 - f. 1.6 Extremely insensitive articles which do not have a mass explosion hazard

C. The following Class 1 hazardous materials divisions are not permitted onboard Mesa Airlines, Inc. aircraft under any circumstance.

1. All of the following Explosives have IATA IMP Code REX:
 - a. 1.1
 - b. 1.2
 - c. 1.3
 - d. 1.3 (except 1.3C and 1.3G)
 - e. 1.4F
 - f. 1.5
 - g. 1.6

D. The following divisions of Class 1 hazardous materials are approved for transport on Mesa Airlines, Inc. cargo-only aircraft:

1. Explosives 1.3C and 1.3G are allowed on Cargo Aircraft Only.

Hazardous Materials Manual

Explosives Class 1.3			
Division	IMP Code		
1.3C	RCX		
1.3G	RGX		

- Explosives of Class 1.4 are allowed on Cargo Aircraft Only.

Explosives Class 1.4			
Division	IMP Code		
1.4B	RXB		
1.4C	RXC		
1.4D	RXD		
1.4E	RXE		
1.4G	RXG		
1.4S	RXS		

7.3.2 Class 2 - Gases

A. Definition

All gases are considered to be hazardous materials as they are mostly transported under pressure, meaning that there is always the risk that the receptacle will turn into a projectile if it gets damaged. It might even explode if temperature and pressure differences occur. Other gases are transported in a solution and in that case the packaging could break due to temperature and pressure. Gas can be transported liquefied or refrigerated as well which means that these products are very cold and in case of leakage will damage everything that comes in contact with them. Caution is highly recommended.

B. Divisions

This class has 3 divisions:

1. 2.1 Flammable gases: ignitable after being in contact with air or oxygen
2. 2.2 Non-flammable, non-toxic gases: are oxidizing, asphyxiating or extremely cold and do not come under the other divisions
3. 2.3 Toxic gases: pose a serious threat to the health of humans because of their toxicity and/or corrosive nature


C. 2.3 Toxic gases

The following Class 2 hazardous materials divisions are not permitted onboard Mesa Airlines, Inc. aircraft under any circumstance.


		Toxic Gas	
Division	IMP Code		
2.3	RPG		

Hazardous Materials Manual



- D. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft
1. 2.1 Flammable gases

Flammable Gas		
Division	IMP Code	
2.1	RFG	

2. 2.2 Non-flammable gases

Non-Flammable Gas		
Division	IMP Code	
2.2	RNG	

The “Cryogenic Liquid” handling label must be used in addition to the non-flammable gas (division 2.2) hazard label on packages containing cryogenic liquids (Refrigerated liquefied gases).

Cryogenic Liquid			
Division	IMP Code		
2.2	RCL		

7.3.3 Class 3 - Flammable Liquids

A. Definition

1. Flammable liquids are substances, which at a certain temperature ($\leq 60^{\circ}\text{C}$) release a flammable gas that can be ignited in air. Their degree of danger depends on their flash and boiling point.

Flammable Liquid Flash-Point & Boiling Point		
Packing Group	Flash Point, closed cup $^{\circ}\text{C}$ ($^{\circ}\text{F}$)	Initial Boiling Point $^{\circ}\text{C}$ ($^{\circ}\text{F}$)
I	--	≤ 35 (95)
II	< 23 (73)	> 35 (95)
III	≥ 23 (73) but ≤ 60 (140)	> 35 (95)

2. Flash-point is defined as the lowest temperature at which flammable vapor is given off a liquid in a test vessel in sufficient concentration to be ignited in air when exposed momentarily to a source of ignition.

B. Divisions

This class has no divisions

C. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

Flammable Liquid		
Division	IMP Code	
3	RFL	

7.3.4 Class 4 - Flammable Solids

A. Definition

These substances are solids but also few liquids that are flammable under different conditions; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases.

B. Divisions

This class has 3 divisions:

1. 4.1 Flammable solids: solids, which readily combustible solids and solids which may cause fire through friction.
2. 4.2 Substances liable for spontaneous combustion: this division encloses all flammable solids and liquids which do not need an external source to ignite. They react spontaneously on contact with oxygen and/or sunlight.


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3. 4.3 Substances which, in contact with water, emit flammable gases (dangerous when wet): Substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.


C. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

1. 4.1 Flammable solids


During the course of transport, packages, or unit load devices containing self-reactive substances of Division 4.1 must be protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas.

Flammable Solid		
Division	IMP Code	
4.1	RFS	

2. 4.2 Substances liable for spontaneous combustion

Spontaneously Combustible		
Division	IMP Code	
4.2	RSC	

3. 4.3 Substances which, in contact with water, emit flammable gases (dangerous when wet)

Dangerous When Wet		
Division	IMP Code	
4.3	RFW	

7.3.5 Class 5 - Oxidizing Substances and Organic Peroxides

A. Definition

These substances are not necessarily flammable but because they release oxygen they will increase an already existing fire. When in contact with other dangerous goods they are likely to start a chemical reaction.


B. Divisions

This class has 2 divisions:

1. 5.1 Oxidizers: These are substances which in themselves are not necessarily combustible, but may generally cause or contribute to combustion of other material by yielding oxygen
2. 5.2 Organic Peroxides: These substances are thermally unstable. They also yield oxygen and the gas released at that time can cause irritation to the eyes. They are classified into seven types according to the degree of danger (Type A to G; see Appendix C.2 IATA regulations).


C. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

1. 5.1 Oxidizers

Oxidizer		
Division	IMP Code	
5.1	ROX	

2. 5.2 Organic Peroxides

During the course of transport, packages or unit load devices containing organic peroxides of Division 5.2 must be protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas.

Organic Peroxide		
Division	IMP Code	
5.2	ROP	

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7.3.6 Class 6 - Toxic and Infectious Substances

A. Definition

These are liquids and solids that are toxic or can cause infections when workers come in contact with them, so they represent a danger to the health.

B. Examples

1. 6.1 Pesticides, nicotine, strychnine, arsenic
2. 6.2 Blood, needles, genetic material, skin-tissue, HIV-virus


C. Divisions

This class has 2 divisions:


1. 6.1 Toxic substances: liable to cause death or injury or to harm human health if swallowed, inhaled or contacted by the skin (toxic already in small quantities).
2. 6.2 Infectious substances: substances that can cause disease in humans or animals when in contact with them.

D. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

1. 6.1 Toxic substances

Toxic Substance		
Division	IMP Code	
6.1	RPB	

2. 6.2 Infectious substances

Infectious Substance		
Division	IMP Code	
6.2	RIS	

3. Biological substances, Category B (UN3373) do not require the above label but must be marked as follows



7.3.7 Class 7 - Radioactive Material

A. Definition

1. Radioactive material means any material containing radio nuclides which is not excepted according to reference 10.0.1.4 of the IATA DGR. These substances can be harmful to the health of humans and animals and can affect photographic or X-ray film.
2. The radiation from a package containing Radioactive Material of Category II and III is expressed as a Transport Index (TI). The higher the index, the more radiation is being emitted.

B. Divisions

This class has no divisions.

- C. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft.

NOTE

[Refer to "Radioactive Material \(Class 7 - RRW & RRY\)"](#) for further loading limitations and restrictions onboard Mesa Airlines, Inc. cargo only aircraft.

1. Radioactive Material, Excepted Package

For radioactive material in excepted packages (RRE) only the below handling label is required which shows to the handler that the package contains radioactive material in small quantities and for which not all transport requirements are applicable.

Radioactive Material, Excepted Package		
Division	IMP Code	Max. TI
7	RRE	0.0

Radioactive Material, Excepted Package

This package contains radioactive material, excepted package and is in all respects in compliance with the applicable international and national governmental regulations.

UN _____

The information for this package need not appear on the Notification to Captain (NOTOC)

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2. Radioactive Material of Category I-White

Radioactive Material of Category I-White is not subject to distance limitations. They must not be stowed on the Flight-Deck or in the cabin of passenger aircraft.

3. Radioactive Material of Category II-Yellow

Radioactive Material of Category II-Yellow is subject to loading limitations and must be loaded in accordance with aircraft-specific instructions.

Radioactive Material of Category II-Yellow			
Division	IMP Code	Max. TI	
7	RRY	1.0	

4. Radioactive Material of Category III-Yellow

- a. TI more than 10 must be transported under exclusive use and special arrangement.
- b. Radioactive Material of Category III-Yellow are subject to loading limitations and must be loaded in accordance with aircraft specific instructions.

Radioactive Material of Category III-Yellow			
Division	IMP Code	Max. TI	
7	RRY	10.0	

5. Fissile Material

Fissile material, other than fissile excepted will require the Criticality Safety Index label additionally to the RRW or RRY labels. A criticality safety index (CSI) needs to be inserted on the label. This value is comparable to the Transport Index but it measures the likelihood of a nuclear reaction inside the material rather than the radiation measured outside the package. When fissile material is accepted special approval of the competent authority may be required.

Fissile Material			
Division	IMP Code	Max. CSI	
7	RRW, RRY	50.0	

7.3.8 Class 8 - Corrosives

A. Definition

Substances which by chemical action can cause severe damage when in contact with living tissue or, in the case of leakage will materially damage or even destroy, other goods or the means of transport.

B. Divisions

This class has no divisions

C. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

Corrosive Material

Corrosive Material		
Division	IMP Code	
8	RCM	

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7.3.9 Class 9 - Miscellaneous Dangerous Goods

A. Definition

Articles and substances, which during air transport, present a danger not covered by other classes.

B. Examples

1. Substances dangerous to the environment
2. Self-inflating appliances i.e. life jackets
3. Motor vehicles, apparatus with batteries
4. Magnetic material (MAG)
5. Dry Ice (ICE)
6. Polystyrene Beads (RSB)
7. Lithium Batteries
8. Genetically modified micro-organisms (GMMOs) or Genetically modified organisms (GMOs)

C. Divisions

This class has no divisions.

D. Approved for transport on Mesa Airlines, Inc. cargo-only aircraft

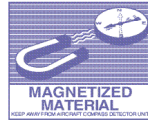
1. Miscellaneous Dangerous Goods

Miscellaneous Dangerous Goods		
Division	IMP Codes	Hazard Label
9	RMD ICE RSB	
	RBI RBM RLI RLM	

2. Genetically modified micro-organisms (GMMOs) or genetically modified organisms (GMOs) (UN 3245) do not require the above label but must be marked as follows.


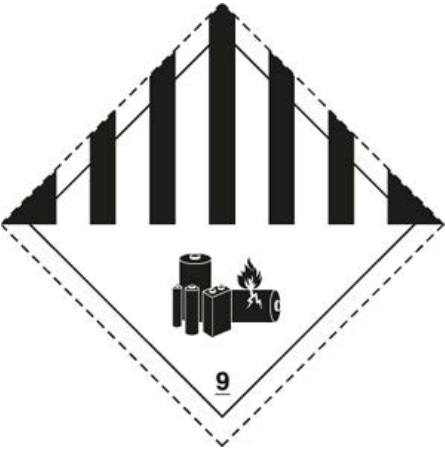


3. For magnetized materials the RMD label will be replaced by the “Magnetized Material” handling label. The use of the “Magnetized Material”-Label depends on the classification of this material. This is done on the basis of field strengths. An overview can be found in the following table.

	Classification of magnetized material	Requirements
Type 1	Magnetized materials with field strengths causing a compass deflection of less than 2 degrees at a distance of 2.1 m.	Nothing to consider
Type 2	Magnetized materials with field strengths causing a compass deflection of more than 2 degrees at a distance of 2.1 m but not more than 2 degrees at a distance of 4.6 m.	 NOTOC, DGD not required; Statement on AWB: “Magnetized material”
Type 3	Magnetized material with field strength sufficient to cause a compass deflection of more than 2 degrees at a distance of 4.6 m.	Such shipments must be accompanied by the required approval from the applicable authority as required and fulfill the requirements stated therein.


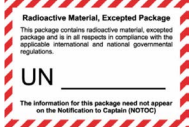



Hazardous Materials Manual

4. Lithium Batteries

Classification	Label
<p>Small lithium metal and lithium ion batteries are excepted from most of the requirements of the ICAO Technical Instructions and IATA DGR provided that they comply with:</p> <ol style="list-style-type: none"> 1. All of the requirements set out in Section II of Packing Instructions 965, 966 and 967 for lithium ion batteries 2. Section II of Packing Instructions 968, 969 and 970 for lithium metal batteries in the latest edition of the IATA DGR. 3. Safety Alert for Operators (SAFO) 10017, 16001, and 16004. <p>Packages containing lithium batteries, or lithium batteries contained in, or packed with, equipment that meet the provisions of Section II of these packing instructions are not required to have a Class 9 hazard label and there is no requirement for a Shipper's Declaration for Dangerous Goods for consignments of those batteries. In the additional requirements of Section II the lithium battery Mark is required as specified in packing instructions 965, 966, 967, 968, 969 and 970.</p> <p>Packages containing lithium batteries in accordance with Section IB of the applicable packing instructions 965 and 968 are required to have a Class 9 Lithium Batteries label together with the Lithium Batteries Mark and they also require a Shipper's Declaration for Dangerous Goods.</p>	
<p>Lithium metal and lithium ion batteries larger than those described in Section II of the applicable packing instruction must be assigned to Class 9 and consigned as UN 3090 (Lithium metal batteries), UN 3480 (Lithium ion batteries), UN 3091 (Lithium metal batteries contained in equipment or Lithium metal batteries packed with equipment) or UN 3481 (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment). All applicable requirements contained in the IATA Dangerous Goods Regulations relating to these commodities must be complied with, including the training requirements; a "Shipper's Declaration for Dangerous Goods" must be issued, and packages must bear the Class 9 - Lithium Batteries hazard label.</p>	

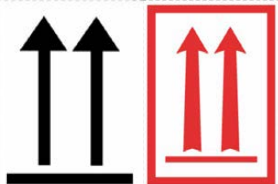




7.4 Handling Labels or Marks Identifying Exemption from Specific Regulations

- A. Packages bearing labels and marks as shown below indicate that they contain hazardous materials in extremely small quantities which represent such a small hazard during transport that the regulations are less strict with regards to packaging requirements, documentation, mark and labeling.
- B. However, as for the ULD build-up the same stringent rules as for any other hazardous materials packages apply, meaning that they have to be loaded following the LIFO principle, and it is also imperative to fully secure such cargo when loaded in a container or in the bulk compartment of an aircraft.
- C. The label or mark is also to ensure that if the shipment is damaged appropriate emergency action will be taken. Depending on the type of hazardous contents, packages as described above will carry one of the following labels or marks.

Label	Explanation
	Excepted Quantity Package Mark (REQ)
	"Radioactive Material - Excepted Package" label (RRE)
	Lithium Battery Mark
	"Biological Substance, Category B" mark (RDS)
	Genetically modified micro-organisms (GMMOs) or Genetically modified organisms (GMOs) mark


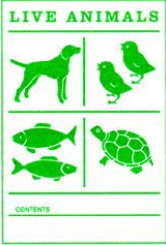

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7.5 Handling Labels and Marks

Item	Handling Label	Explanation
"Package Orientation" label		<p>"This Way Up" labels are required; at least two of these labels must be used. One label must be affixed to each of two opposite sides of the package, with the arrows pointing in the upright position.</p>
"Environmentally Hazardous Substances" mark		<p>Packages containing environmentally hazardous substances must be marked with the "Environmentally Hazardous Substances" mark with the exception of single packaging's and combination packaging's where such single packaging's or the inner packaging's of such combination packaging's have a net quantity of 5 L or less for liquids or a net quantity of 5 kg or less for solids.</p>
RCL "Cryogenic Liquid" label		<p>Gases frozen to extreme temperatures will become liquefied. Extreme care must be used when handling these shipments. The "cryogenic liquid" handling label must be used in addition to the non-flammable gas (division 2.2) hazard label on packages containing cryogenic liquids (Refrigerated liquefied gases).</p> <p>Packages bearing this label must be stowed away from AVI and Hatching Eggs</p>
MAG "Magnetized Material" label		<p>Packages bearing this label must not be loaded in such a position that they will have a significant effect on the aircraft instruments (direct-reading magnetic compasses or master compass detector units). The loading position depends on the type of aircraft used. This label replaces the Class 9 label.</p>
"Keep away from heat" label		<p>During the course of transport, packages or unit load devices containing self-reactive substances of Division 4.1 or organic peroxides of Division 5.2 must be protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas. The "Keep away from heat" label is mandatory in this case</p>

7.6 Special Handling Labels

For loading and Handling of Perishables and Live Animals please act according to IATA 9.3.14 as they are not allowed to be loaded with some types of Dangerous Goods.

Item	Special Handling Label	Explanation
"Perishable" label		All perishable cargo should be labeled with the standard IATA "PERISHABLE" label.
"Live Animals" label		It is mandatory to attach at least one IATA "Live Animals" label properly completed, to each live animal container, unless otherwise stated in the individual container requirements. Animal containers may have the appropriate labeling imprinted or placed on a tag.
"Time & Temperature Sensitive" label		Time and temperature sensitive shipments which have also been booked as such must be labeled with the standard IATA "Time and Temperature Sensitive" label

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7.7 Handling of Dangerous Goods

- A. The correct handling of hazardous materials is essential if adequate safety standards are to be maintained. The various hazardous materials packaging are strong; they are designed and tested to withstand all conditions normal in air transport. However, normal conditions do not include being dropped off cargo loaders, nor being run over by GSE.
- B. Accidents do occur and packaging does sometimes fail. All staff must therefore ensure that these packages are not loaded onto an aircraft.
- C. To prevent damaged hazardous materials being loaded, and also to ensure that damage has not occurred during the flight, the following mandatory integrity checks must be carried out.
 - 1. Packages are not loaded onto an aircraft or into a ULD unless they have been inspected immediately prior to loading and found free from visible leaks, fumes, or damage.
 - 2. When offloading packages containing hazardous materials from the aircraft they must be checked for signs of damage, leakage, fumes, or contamination. Also check the aircraft/ULD hold for evidence of leakage or spillage. [Refer to "Damaged or Leaking Shipments"](#) for procedures to follow if packages are discovered to be leaking.
- D. Hazardous material shipments follow the quantity and loading table for cargo locations, [refer to "Loading Precautions for Incompatible Loads"](#).
- E. For the business partner policies and procedures for handling hazardous materials, personnel should [refer to "Codeshare Partner Manuals"](#) for the appropriate document reference.

7.7.1 Loading Onboard Aircraft

- A. Correct loading of hazardous materials is essential if they are to be carried safely. Hazardous materials must never be loaded on the flight deck or in the passenger cabin of passenger aircraft.
- B. When handling hazardous materials:
 - 1. Never load a damaged package on board an aircraft or into an ULD. When damage is discovered always check the rest of the consignment.
 - 2. If a damaged package is leaking, fuming, or burning call in the local Emergency Services and following local emergency station procedures.
 - 3. Any incident involving damage, leaking, fuming, fire, or injury must be reported to local leadership and the appropriate Incident / Accident form(s) completed.
 - 4. Local procedures must be in place in case of an emergency / incident / accident.
- C. The load plan for each flight will state the required loading position for all dangerous goods included in the load, in accordance with DHL and Mesa Airlines, Inc. procedures.

These instructions must be complied with and if in any doubt about these instructions staff should consult with a lead ramp agent or load planner before loading

- D. General information and restrictions for different classes of dangerous goods, together with examples of applicable warning labels are outlined, [refer to "Hazardous Materials Approved for Mesa Airlines, Inc. Cargo Only Operations"](#), [refer to "Handling Labels or Marks Identifying Exemption from Specific Regulations"](#), [refer to "Handling Labels and Marks"](#), and [refer to "Special Handling Labels"](#).

7.7.2 Securing of Dangerous Goods

- A. All packages must be secured in a manner that will prevent any movement during warehousing and/or ground/air transportation.
- B. Hazardous materials shall be secured to prevent any movement and damage by other shipments or cargo during flight.
This will be done by lashing/strapping loose loaded pieces in ULD's.
- C. In some circumstances, however, lashing/strapping of individual pieces may not be necessary:
1. If shipments are placed on a pallet and are properly secured using the pallet net.
 2. If shipments are placed in the bulk hold of an aircraft and the hold is 100% volumetrically full (shipments will not move in any direction during flight.).
 3. If shipments are placed in a container which is 100% volumetrically full (shipments will not move in any direction during flight).
- D. If none of the above three exception conditions can be met, then the packages of hazardous materials must be protected from being damaged including the movement of baggage, mail, stores or other cargo either using certified straps, adequate lashing rope or any other available securing material, depending on the weight of the pieces.
- E. In all cases, care must be taken to ensure that the minimum required segregation rules are applied for non-compatible shipments. The minimum distance in this situation is 3.28 feet or 1 meter.
- F. Handling labels must be respected at all times, this includes 'This Way Up' labels, regardless of the increased effort involved to accommodate such requirements during the ULD build-up process.

NOTE

Even if a container is flagged as '100% volumetrically full', it may still be necessary to use additional restraints to secure hazardous materials shipments from being damaged by any movement during transportation.

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7.7.3 Inspections

- A. After hazardous materials are loaded, lead ramp agent ensures:
 - 1. Packages are secured to prevent shifting or change in the orientation of the package.
 - 2. Packages, over packs, and ULDs are inspected for damage and leakage.
- B. After unloading dangerous goods from the aircraft, ramp agent inspects aircraft area that was holding the dangerous goods for any signs of leakage or contamination.

NOTE

If any issues, damage, leaking or spills are discovered from shipments or ULD's with shipments containing hazardous materials, immediately notify station leadership and follow local emergency procedures. [Refer to 4.2 "Emergency Procedures on the Ground"](#).

7.7.4 Dangerous Goods in ULDs

7.7.4.1 General

- A. For the full policies and procedures for dangerous goods in ULDs, [refer to 1.2.5 "Codeshare Partner Manuals"](#) for the applicable manual with additional guidance.
- B. Each ULD containing hazardous materials requiring a hazard label must clearly display on its exterior an indication that hazardous materials are loaded inside. This is done through the use of a Hazardous Materials/Dangerous Goods ULD tag. There are two approved methods for displaying a Hazardous Materials/Dangerous Goods ULD tag.
 - 1. Method 1
 - a. The official red-hatched border Hazardous Materials/Dangerous Goods ULD tag must be completely filled out, with the primary and subsidiary hazard class(es) or division(s) number(s) clearly hand written or printed in the appropriate space provided.
 - b. The red hatched borders around the tag must be clearly visible and must not be damaged / altered in any way.
 - c. The tag must be signed by an appropriately trained and certified member of staff to confirm that all goods have been loaded according to ICAO/IATA.
 - d. The name and signature at the bottom of the Hazardous Materials/Dangerous Goods tag must be clearly visible at all times.
 - e. The tag must be placed inside the pouch at the very front so that it is clearly visible and is not blocked or obscured by any other piece of paper or other material.

DHL CONTAINER / PALLET
No. AAC 9398DHL

DESTINATION: GVA

NET WEIGHT (Kg): 1594

TARE WEIGHT (Kg): 255

TOTAL: 1849

LOADED	FLIGHT	POSITION ON A/C
LEJ	BCS4982/24	N

TRANSFER AT	FLIGHT	POSITION ON A/C

CONTENTS: *DGR ICE GVA ON LMIPTDXACSLTRCNY

REMARKS: CL 9

LOADED BY:
The signature below certifies there is no evidence of any damage or leaking package containing dangerous goods loaded on/in thisULD. All packages are secured from being damaged, including by the movement of baggage, mail, stores or other cargo. All incompatibilities have been loaded in compliance with IATA DGR 9.3.2 and 49 CFR 175.78(a).

NAME: JOHN DOE SIGNATURE: Doe

REMARKS: CL 9

WS: LEJ73K1302 Printed: 04/23 - 18:38:33

Figure 7-1: Hazardous Materials/Dangerous Goods Tag (Method 1)

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2. Method 2

- a. The HUID is affixed to the Hazardous Materials/Dangerous Goods ULD tag using glue or staples. It is not enough to place the two documents together in the pouch, they must be properly attached to one another first.
- b. The red hatched borders of the Hazardous Materials/Dangerous Goods tag must be clearly visible and must not be damaged / altered in any way.
- c. The tag must be signed by an appropriately trained and certified member of staff to confirm that all goods have been loaded according to ICAO/IATA.
- d. The name and signature at the bottom of the Hazardous Materials/Dangerous Goods tag must be clearly visible at all times.
- e. The tag must be placed inside the pouch at the very front so that it is clearly visible and is not blocked or obscured by any other piece of paper or other material.

PALLET/CONTAINER NO AAC9398DHL		
DESTINATION	POSITIVE	
GVA	P	
NET WEIGHT (Kg)	1594	
TARE WEIGHT (Kg)	255	
TOTAL VOLUME %	TOTAL (Kg)	
100	1849	
LOADED AT	FLIGHT	A/C
LEJ	BCS4982/24 GBMRG	
TRANSFER	FLIGHT	A/C
CONTENT	*DGR ICEGVAONLMI PTDXACSLTRCNY	
IDENTIFIER	H368420286	
REMARKS	CL.9	
NAME: JOHN DOE SIGNATURE: Doe		

Figure 7-2: Hazardous Materials/Dangerous Goods Tag (Method 2)

- C. DHL and Mesa Airlines, Inc. procedures also require the placement of a special tag in case of radioactive material, this in order to ensure that people are aware the ULD contains radioactive material and keep distance to avoid exposure to radiation.



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7.8 Special Load Notification to Captain (NOTOC)

MISC 49 CFR 175.30 49 CFR 175.33

7.8.1 General

- A. It is a mandatory requirement that a Mesa Airlines, Inc. captain must be notified of any hazardous materials and/or any other special cargo (live animals, perishable cargo and human remains) that are to be carried as cargo on a flight as soon as practicable prior to departure of the aircraft.
- B. The Mesa Airlines, Inc. captain must be advised of live animals and perishable cargo especially as the hold ventilation and heating systems are controlled from the flight deck on some aircraft. The information must be presented on a dedicated form, a "Notification to Captain".
- C. A Notification to Captain (NOTOC) will be made to notify the captain of which hazardous materials and other special cargo are loaded where in the aircraft.
- D. [Refer to "Codeshare Partner Manuals"](#) for the business partner manuals that contain the full policies and procedures for completing the NOTOC.

7.8.2 Flight Crew NOTOC Procedures for Cargo Only Operations

- A. For DHL Express, flight crewmembers will verify on the SABLE Weight and Balance report, provided by the ground crew, whether a NOTOC is required or not based on the automated entry.
- B. If a NOTOC is listed as required on the Weight and Balance report, ensure a NOTOC is provided by the ground crew, or request one from the ground personnel if not provided. Review the NOTOC for loading incompatibilities and ensure the shipments have been loaded in accordance with the approved policies and limitations.
- C. It is mandatory for the loading agent and captain to sign every NOTOC.
 - 1. The signature from the responsible person for loading (lead ramp agent) is required to confirm that the items have been loaded according to the Mesa Airlines, Inc. *Cargo Procedures Manual* in the position indicated on the NOTOC and that there is no evidence of any damage or leakage from the packages and ULDs loaded on the aircraft.
 - 2. The captain needs to state his full name and sign the NOTOC, to certify receipt and read the information contained in the NOTOC.

Page 2 of 2		SPECIAL LOADNOTIFICATION TO CAPTAIN											
Telephone number where a copy of this NOTOC can be obtained in case of emergency : +49 341 4499 1819													
STATION OF LOADING / UNLOADING : BGY / LEJ FLIGHT : BCS135 DATE : 14-Dec-2018 AIRCRAFTREG : DAEAA													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
DST	AIR WAYBILL number	Number of packages	UN or ID Number	Proper shipping name of article	CLASS / Division	Sub Hazard	PG or Cat. RRY	NET QTY/TI of each pack.	CODE	CAO	ERG code	ULD Number	Position
				NO DANGEROUS GOODS IN ACCORDANCE TO REQUIREMENTS OF IATA DGR 9.5 ON BOARD									
OTHER SPECIAL LOAD													
DST	AIR WAY BILL number	Number of packages	Contents		Temperature	Quantity / package	CODE	ULD Number	Position				
			NO SPECIAL LOAD ON BOARD										
ADDITIONAL INFORMATION													
DST	AIR WAYBILL number	Content											

Responsible person for loading		Pilot in command	
The items have been loaded according to the current loading manual of the carrying airline in the position indicated above. There is no evidence of any damage or leakage from the packages and ULDs loaded on the aircraft.		Signature	Signature

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Figure 7-4: Example of NOTOC

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Page of	NOTIFICATION TO CAPTAIN SUMMARY SHEET																	
STATION OF LOADING / UNLOADING : / FLIGHT : DATE : AIRCRAFTREG :																		
GOODS SUMMARY																		
Position / Uld	CAO*	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	Division 6.1	Division 6.2	CLASS 7	CLASS 8	CLASS 9	DRY ICE CLASS 9 UN1845	UN3090 CLASS 9 Lithium Metal Batteries Section IA & IB CAO	UN3091 CLASS 9 Lithium Metal Batteries Section I	UN3480 CLASS 9 Lithium Ion Batteries Section IA & IB CAO	UN3481 CLASS 9 Lithium Ion Batteries Section I	SPECIAL LOAD	
Flight total	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 TI / 0 CSI	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	
ERG codes																		

All listed goods on this NOTOC have been accepted in accordance with the ICAO / IATA regulations and the required documentation EU format (separating decimals with a ",")
 The transport document is created by : Thomas Goetz (DHL Express GHO) / Senior Expert Global Network Support

*: CAO packages must be loaded so they are accessible during flight. CAO packages may be loaded inaccessible in a lower-deck class C compartment (aircraft type specific) providing the smoke detection/fire suppression system is serviceable.

This does not apply to:

- UN 3529, Engine, internal combustion, flammable gas powered or Engine, fuel cell, flammable gas powered or Machinery, internal combustion, flammable gas powered or Machinery, fuel cell, flammable gas powered;
- flammable liquids (Class 3), Packing Group III, other than those with a subsidiary hazard of Class 8 or UN 3528, Engine, internal combustion, flammable liquid powered or Engine, fuel cell, flammable liquid powered or Machinery, internal combustion, flammable liquid powered or Machinery, fuel cell, flammable liquid powered;
- toxic substances (Division 6.1) with no subsidiary hazard other than Class 3;
- infectious substances (Division 6.2);
- radioactive materials (Class 7);
- miscellaneous dangerous goods (Class 9).

Note: Lithium Batteries of class 9 may have additional special load requirements dependent upon the Operator – Refer to GSAM!

Figure 7-5: Example of NOTOC Summary Sheet

7.9 Loading Precautions for Incompatible Loads

7.9.1 Incompatibility Chart

- A. To see which substances require separation, use the incompatibility table below. For storage on an aircraft, in a cargo facility, or in any other area at an airport designated for the storage of hazardous materials, packages containing hazardous materials which might react dangerously with one another may not be placed next to each other or in a position that would allow a dangerous interaction in the event of leakage.
- B. If the class is not mentioned on the table, no segregation is necessary.
- C. Don't forget to check all labels on the package, this means both primary and secondary hazard.

Table 7-1: Hazardous Materials Incompatibility Chart

Hazard Class / Division	IATA IMP Code	1.3C	1.3G	1.4B	1.4C	1.4D	1.4E	1.4G	2.1	2.2	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8	9	9	FIL	HUM	EAT PEM PES PEP	HEG	AVI	LHO	PEF			
		RCX	RGX	RXB	RXC	RXD	RXE	RXG	RFG	RNG	RCL	RPG	RFL	RFS	RSC	RFW	ROX	ROP	RPB	RIS	RRY	RCM	RBI/RBM RLI/RLM	ICE										
1.3C	RCX			2					1	1												1	2											
1.3G	RGX			2					1	1													1	2										
1.4B	RXB	2	2						1	1													1	2										
1.4C	RXC			2					1	1													1	2										
1.4D	RXD			2					1	1													1	2										
1.4E	RXE			2					1	1													1	2										
1.4G	RXG			2					1	1													1	2										
2.1	RFG	1	1	1	1	1	1	1																2										
2.2	RNG	1	1	1	1	1	1	1																										
2.2	RCL	1	1	1	1	1	1	1																										
2.3	RPG	1	1	1	1	1	1	1																										
3	RFL	1	1	1	1	1	1	1																										
4.1	RFS	1	1	1	1	1	1	1																										
4.2	RSC	1	1	1	1	1	1	1																										
4.3	RFW	1	1	1	1	1	1	1															1											
5.1	ROX	1	1	1	1	1	1	1					1		1									2										
5.2	ROP	1	1	1	1	1	1	1																										
6.1	RPB																															2		
6.2	RIS																															2		
7	RRY																									4						5		
8	RCM	1	1	1	1	1	1	1									1															5		
9	RBI/RBM RLI/RLM	2	2	2	2	2	2	2					2	2			2																	
9	ICE																																6	
	FIL																																6	
	HUM																																3	
	EAT PEM PES PEP																																3	
	HEG																																5	
	AVI																																6	
	LHO																																2	
	PEF																																	2

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NOTE

Division 1.4S has no incompatibilities.

NOTE

During acceptance and storage of the goods, incompatible pieces must be separated from each other.

NOTE

It is not permitted to load live animals in closed ULDs, except those animals that are allowed according to the applicable container requirement specified in the IATA Live Animal Regulations. The segregation as detailed above must be respected.

D. Rule 1

1. Packages containing hazardous materials, which might react dangerously with each other, must not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage. To maintain acceptable segregation between packages containing hazardous materials having different hazards, the segregation requirements outlined in IATA DGR Table 9.3.A must be observed. The segregation requirements apply based on all hazard labels attached to the package, irrespective of whether the hazard is the primary or subsidiary hazard.
2. A minimum of 3.3 feet (100 cm) must be maintained between incompatible materials. Space in-between may be separated with non-hazardous freight.
3. Whenever possible, incompatible dangerous goods should be loaded on different edges of the ULD.

E. Rule 2

1. Do not load in the same bulk compartment/bulk hold or ULD.
2. When loaded on separate pallets, do not load the pallets next to each other and keep a minimum separation of one loading position.
3. When loaded on the same aircraft with explosives other than Division 1.4S, Division 1.4B explosives must be loaded into separate ULDs and when stowed aboard the aircraft, the ULDs must be separated by other cargo with a minimum separation distance of 200 cm.
4. Lithium batteries in section I (RLI/RLM), IA and IB (RBI/RBM) must not be loaded in the same bulk compartment/bulk hold or ULD together with: RCX, RGX, RXB, RXC, RXD, RXE, RXG, RFG, RFL, RFS, or ROX.

F. Rule 3

1. Do not load animals which are natural enemies close to each other.
2. Do not load male and female mammals together.
3. Do not load animals in quarantine and regular animals together.

4. Do not load Live Animals with intensive smell into the same hold or ULD with EAT, PEM, PES or PEP.
5. When carrying horses, load males forward of females.
6. As a general rule, do not load animals together that do not have the same health status. Animals with different or unknown health- or epidemic status require separate means of transportation or a hermetically sealed territorial segregation to prevent the contact or transmission of pathogens across the airspace.
7. Do not load HUM in the same hold or ULD as AVI, EAT, PEM, PES, PEP or LHO.
8. Do not load LHO in the same hold or ULD as AVI, EAT, PEM, PES, PEP or HUM.

G. Rule 4

1. The following minimum distances between radioactive material Category II and III-Yellow (RRY) and undeveloped film (FIL) must be observed. The distances are valid horizontally and vertically.

Table 7-2: Radioactive material minimum distances

Total sum of TI	2 hours or less	2 – 4 hours	4 – 8 hours	8 – 12 hours	12 – 24 hours	24 – 48 hours
	meters	meters	meters	meters	meters	meters
1	0.4	0.6	0.9	1.1	1.5	2.2
2	0.6	0.8	1.2	1.5	2.2	3.1
3	0.7	1.0	1.5	1.8	2.6	3.8
4	0.8	1.2	1.7	2.2	3.1	4.4
5	0.8	1.3	1.9	2.4	3.4	4.8
10	1.4	2.0	2.8	3.5	4.9	6.9
20	2.0	2.8	4.0	4.9	6.9	10.0
30	2.4	3.5	4.9	6.0	8.6	12.0
40	2.9	4.0	5.7	6.9	10.0	14.0
50	3.2	4.5	6.3	7.9	11.0	16.0

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2. For B-737-400 and B-737-800 aircraft:
 - a. Separate RRY from passengers and crew by selecting one of the following loading combinations.

Allowed combination of positions	Max T.I. and allowed Loading Positions or Areas											FWD & AFT Holds
	1	2	3	4	5	6	7	8	9	10	11	
	A	B	C	D	E	F	G	H	J	K	L	
Combination 1	No RRY			Max 50.0 TI together								No RRY Allowed
Combination 2	No RRY					Max 200.0 TI together						

- b. Loading priority is Position 10 and forward
- c. Loading of 200TI must be spread evenly between Positions 6 to 11 (Max. 50 TI on each position)
- d. Excepted Packages of Radioactive Material (RRE) and Radioactive Material Category I White (RRW) - ALLOWED ON EACH POSITION.

H. Rule 5

1. Radioactive materials Category II and III must not be loaded in the same ULD with Live Animals (AVI), Hatching Eggs (HEG), and Live Human Organs (LHO).
2. Do not load the ULDs next to each other and keep a minimum separation of one loading position.

I. Rule 6

1. "Non-ventilated" hold/compartments
 - a. Do not load dry ice and live animals together in the same hold or compartment.
 - b. Do not load cryogenic liquid and live animals together in the same hold or compartment.
2. "Ventilated" hold/compartments
 - a. Load live animals forward of dry ice or cryogenic liquid
 - b. Load live animals higher than dry ice or cryogenic liquid
 - c. Keep a minimum distance of one loading position

3. Exceptions

Animals allowed to be loaded in a closed ULD according to the applicable Container Requirement specified in IATA Live Animal Regulations may be loaded in the same hold or compartment with dry ice. In this case a minimum distance of 1.7 feet (50 cm) must be kept and live animals must be loaded higher than dry ice.

J. Rule 7

1. Do not load Hatching Eggs and Day-Old Chicken in the same bulk compartment or on the same pallet.
2. In ventilated ULD compartments:
Load Hatching Eggs forward of Day-Old Chicken and keep a minimum distance of one position between the ULDs.

K. Rule 8

1. Separate different types of perishable goods. Specific incompatibility and segregation requirements can be found in IATA Perishable Cargo Regulation Table 5.3.A.
2. Flowers (PEF) must be separated from fruits and vegetables (PEP).
3. In case of incompatibility or segregation requirement do not load in the same bulk compartment or ULD.
4. When loaded on separate open pallets, do not load the pallets next to each other and keep a minimum separation of one position.

7.10 Special Loading Procedures

7.10.1 Radioactive Material (Class 7 - RRW & RRY)

MISC 49 CFR 175.700

A. General

1. In order to avoid exposure, radioactive packages must be stowed and loaded in such a way that the cumulative effect of all the boxes together is limited. The radiation level outside the package is expressed as a Transport Index (TI) value. The limits for Mesa Airlines, Inc. aircraft are:
 - a. Maximum TI per package: 10
 - b. Maximum TI per ULD/group of packages: 50
 - 1) The term "group of packages" means packages that are separated from each other in an aircraft by a distance of 20 feet (6 meters) or less.
 - 2) Each group of packages must be separated from every other group in the aircraft by not less than 6 m (20 feet), measured from the outer surface of each group.
 - c. The combined Transport Index of all the packages on the aircraft can be no greater than 200, and the combined criticality index of all the packages on the aircraft is no greater than:
 - 1) 50 on a non-exclusive use cargo aircraft, or
 - 2) 100 on an aircraft assigned for the exclusive use of the shipper of the specific shipment of Class 7 material.

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2. Radioactive materials are divided into three categories, Categories I, II and III.
3. For more information on radioactive material, [refer to "Class 7 - Radioactive Material"](#).

B. Category I (White Label - RRW)

1. There are no restrictions for loading Radioactive Material Category I-White (RRW). Such articles emit a radiation level so low as to be negligible.
2. No Transport Index is shown on the hazard label.

C. Category II & III (Yellow Label - RRY)

1. These are materials with a measurable radiation level outside the package. The Transport Index for each package will be shown on labels affixed to that package.
2. Radioactive material having a Transport Index bigger than zero must be located at a minimum distance from the flight deck. 49 CFR 175.702 gives details of minimum separation distances between the flight deck and any package containing radioactive materials. The minimum distance is determined according to the Transport Index of the package or the sum of the Transport Indices of a group of packages and must be observed.
3. To ensure maximum separation distances between passengers and crew, packages containing radioactive material, when loaded shall always be stowed on the floor of the compartment or ULD. It must be ensured that no damage can be caused by other goods placed on top of these dangerous goods. Radioactive materials must be restrained so that they cannot move under any circumstances during flight.
4. For B-737-400 and B-737-800 aircraft:
 - a. Separate RRY from passengers and crew by following the below loading combinations.
 - b. Loading priority is Position 10 and forward
 - c. Loading of 200TI must be spread evenly between Positions 6 to 11 (Max. 50 TI on each position).
 - d. Excepted Packages of Radioactive Material (RRE) and Radioactive Material Category I White (RRW) - ALLOWED ON EACH POSITION.

	Max T.I. and allowed Loading Positions or Areas											
Allowed combination of positions	1	2	3	4	5	6	7	8	9	10	11	FWD & AFT Holds
	A	B	C	D	E	F	G	H	J	K	L	
Combination 1	No RRY			Max 50.0 TI together								No RRY Allowed
Combination 2	No RRY					Max 200.0 TI together						

7.10.2 Dry Ice (Class 9 - Ice)

MISC 49 CFR 175.900

- A. The following regulations must be applied when carrying dry ice (ICE) for use as a refrigerant or as cargo on board of an aircraft.
- B. The structure of compartments or unit load devices (ULD) shall be protected by insulating material against direct contact with the dry ice or its packaging.
- C. Transit stations and the station of destination shall ensure that time is allowed to permit adequate ventilation before staff enter the compartment.
- | D. For B-737-400 and B-737-800 aircraft:
 - 1. Loading of dry ice (ICE) together with live animals (AVI) on the main deck is forbidden.
 - 2. Maximum packed dry ice allowed per cargo hold.

	Max. ICE allowed in Pounds and (Kilograms)			
	Main Deck	Fwd Hold	Aft Hold	Combined Total
Normal operation	5500 lbs	989 lbs	1190 lbs	5500 lbs
	2495 kg	44 kg	540 kg	2495 kg
Single A/C pack operation	2750 lbs	494 lbs	595 lbs	2750 lbs
	1247 kg	224 kg	270 kg	1247 kg

7.10.3 Magnetized Material (Class 9 - MAG)

- A. Magnetized material must not be loaded in such a position that they will have a significant effect on the direct-reading magnetic compasses or on the master compass detector units. The loading position therefore depends on the type of aircraft used.
- | B. For B-737-400 and B-737-800 aircraft:
Load magnetized material by following the below loading limitations.

Fwd Hold	1	2	3	4	5	6	7	8	9	10	11	Aft Hold
	A	B	C	D	E	F	G	H	J	K	L	
Not Allowed						Allowed						

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7.10.4 Toxic and Infectious Substances (Class 6 - RPB and RIS)

Substances of Class 6 (Toxic and Category A Infectious substances) and substances requiring a subsidiary hazard "Toxic" shall not be stowed in the same compartment with live animals, foodstuffs, feed or other edible substances intended for consumption by humans and animals.

7.10.5 Cryogenic Liquid (Class 2 - RCL)

Cryogenic liquids are packed in packages with a vent opening, in order to release the gas to prevent a buildup of pressure inside the receptacle. It is therefore very important to follow the instructions on the package which indicates the package must be kept upright and handled with care. Take special care not to drop these packages.

7.10.6 Self-Reacting Substances and Organic Peroxides

Packages or ULDs containing shipments of self-reactive substances of Division 4.1 (RFS) and/or Organic Peroxides (ROP) of Division 5.2 must be protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas during the course of loading.

7.10.7 Liquid Dangerous Goods

Packages bearing the package orientation 'This Way Up' label must be stowed accordingly. Single packages with end closures containing liquids must be stowed with such closures upwards, notwithstanding such packages have side closures.

7.10.8 Cargo Aircraft Only Shipments

- A. Packages or overpacks of dangerous goods bearing the "Cargo Aircraft Only" (CAO) label must be loaded on a cargo-only aircraft only, in accordance with the aircraft specific loading positions that are approved for CAO shipments.
- B. For B-737-400 and B-737-800 aircraft:
 - If CAO packages are loaded, they must be accessible during flight as described below.
 - 1. An aisle must be built on all pallets containing CAO shipments that require crewmember accessibility, allowing a crew member to walk to the rear of the pallet during flight.
 - 2. The following loading positions are considered accessible and are approved for CAO shipments:
 - a. Position 1 (A);
 - b. Position 2 (B) on the main deck if Position 1 (A) is loaded with an 88" pallet with an aisle, and the aisle continues on the pallet to Position 2 (B);
 - c. Or Position 3 (C) through Position 10 (K) so long as an aisle is built on 88" pallets from Position 1 (A) and the aisle extends to and includes the position loaded with the CAO shipment.
 - 3. The following loading positions are not permitted to carry CAO shipments:
 - a. Lower-deck
 - b. All containers

- c. Main deck if Position 1 is loaded with 88" ULD without aisle
 - d. Position 11 (L)
- C. The above requirements do not apply to:
- 1. Substances of Class 3, Packing Group III, other than those with a subsidiary hazard of Class 8.
 - 2. Toxic Substances (Division 6.1) with no subsidiary hazard other than Class 3.
 - 3. Infectious Substances (Division 6.2).
 - 4. Radioactive materials (Class 7). [Refer to "Radioactive Material \(Class 7 - RRW & RRY\)"](#)
 - 5. Miscellaneous dangerous goods (Class 9).

7.10.9 Explosives

- A. Class 1 divisions are supplemented with Compatibility Groups, denoted by a letter after the class Division, e.g. 1.4D, which identify the kinds of explosive articles and substances that are deemed to be compatible. An overview about Compatibility requirements can be found in IATA DGR Table 3.1.A and 3.1.B.
- B. Most explosives are forbidden for air transport with very few exceptions in division 1.3 and most 1.4.
[Refer to "Class 1 - Explosives"](#) for all approved and forbidden explosives for air transport.
- C. Class 1 hazardous materials must be segregated from shipments with lithium batteries.

7.10.10 Class 2 Oxidizers and Compressed Oxygen

Compressed oxygen, when properly labeled Oxidizer or Oxygen, may be loaded and transported as provided:

- A. Except for Oxygen, compressed, if hazardous materials with an OXIDIZER label are loaded in an inaccessible cargo compartment, the cargo compartment must have a fire or smoke detection system and a fire suppression system.
- B. In addition to the quantity limitations prescribed in § 175.75, no more than a combined total of six cylinders of compressed oxygen may be stowed on an aircraft in the inaccessible aircraft cargo compartment(s) that do not have fire or smoke detection systems and fire suppression systems.
- C. When loaded into in an inaccessible cargo location on a cargo-only aircraft, cylinders of compressed oxygen must be stowed horizontally on the floor or as close as practicable to the floor of the cargo compartment or unit load device. This does not apply to cylinders stowed in the cabin of the aircraft in accordance with medical-use compressed oxygen.

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- D. When transported in a Class B aircraft cargo compartment or its equivalent (i.e., an accessible cargo compartment equipped with a fire or smoke detection system, but not a fire suppression system), cylinders of compressed oxygen must be loaded in a manner that a crew member can see, handle and, when size and weight permit, separate the cylinders from other cargo during flight. No more than six cylinders of compressed oxygen and, in addition, one cylinder of medical-use compressed oxygen per passenger needing oxygen at destination - with a rated capacity of 1000 L (34 cubic feet) or less of oxygen - may be carried in a Class B aircraft cargo compartment or its equivalent.

7.11 Hazardous Materials Processing and Administration Facilities

In general, each facility accepting and processing hazardous materials shall have:

- A. Hazardous materials office
- B. Hazardous materials acceptance/check-in/cross dock area
- C. Hazardous materials hold/bunker area
- D. Hazardous materials emergency response information

NOTE

[Refer to 1.2.5 "Codeshare Partner Manuals"](#) for further reference materials on requirements for cargo facilities processing hazardous materials.

7.11.1 Hazardous Materials Office

Office with a controlling function of all hazardous materials activities within the facility, such as preparation of transport documents, reporting occurrences/incidents/accidents with relevant documents and equipment adapted to the type of shipments processed.

7.11.2 Hazardous Materials Acceptance/Check-in/Cross Dock Area

Dedicated hazardous materials processing area, with sufficient space for the acceptance and check of hazardous materials, with an emergency spill kit and other relevant requirements/equipment to support the processing of the shipments.

7.11.3 Hazardous Materials Hold/Bunker Area

Dedicated area with sufficient separate spaces for transit storage of hazardous materials waiting for loading and for temporary storage of hazardous materials on hold (due to non-compliance of the shipment) including damaged shipments and spills with an emergency spill kit and other relevant requirements/equipment to support the processing of the shipments (separate area for Class 1 and 7).

7.11.4 Radioactive Materials Procedures/Equipment

In case the facility is also accepting and processing radioactive materials, local procedures (Radiation Protection Program) and sufficient equipment / trained staff shall be in place, applying to all the work involving radioactive materials in accordance with international / national / local legislation and hazardous materials policy & procedures. This is to protect the environment and population against ionising radiation during the acceptance, handling, loading and offloading of radioactive materials as well as in the event of incidents / accidents.

7.11.5 Storage Segregation

[Refer to "Loading Precautions for Incompatible Loads"](#) for Incompatible Loads for information regarding which substances require separation.

7.12 Cargo Interline

When operating within the DHL Express network, cargo has the ability to interline with other air carriers. Any cargo, including dangerous goods, that are accepted from another air carrier must adhere to Mesa Airlines, Inc. approved procedures as outlined in the Hazardous Materials Manual and Cargo Procedures Manual. Hazardous Materials that are not prepared for shipment in accordance with all regulations and Mesa Airlines, Inc. policies and procedures must not be accepted for transportation aboard Mesa Airlines, Inc. aircraft.

END



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Chapter 8: Irregularities

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Chapter 8: Irregularities

8.1 Discrepancies

MISC 49 CFR 175.31
IOSA: CGO 3.2.18

NOTE

This section applies to all operations. If an irregularity occurs in Canada, [refer to "Reporting Requirements for Canada"](#), or Mexico, [refer to "Reporting Requirements for Mexico"](#). The reporting to Canada or Mexico is IN ADDITION to reporting to US authorities. ALL irregularities that need to be reported, must always be reported to the FAA.

8.1.1 Overview

A “discrepancy” is considered to have occurred if at any time, subsequent to acceptance, it is discovered that regulated materials were accepted or transported in the following conditions:

- A. Improperly described, marked, labeled, certified or packaged.
- B. Other than as described or certified on shipping papers.
- C. In quantities exceeding authorized limits.
- D. Inside containers which are not authorized or that have improper closures.
- E. Inside containers not oriented as shown by markings.
- F. With insufficient or improper absorption materials, when required.
- G. Undeclared hazardous materials.
- H. Transported dangerous goods as cargo, when dangerous goods are discovered to have been carried when not loaded, segregated, separated and/or secured in accordance with provisions of the DGR.
- I. Transported dangerous goods as cargo, when dangerous goods are discovered to have been carried as cargo without information as specified in the Hazardous Material Manual, Special Load Notification to Captain (NOTOC), having been provided to the PIC.

8.1.2 Required Content

It is the responsibility of each person who discovers a discrepancy relative to the shipment of a hazardous material following its acceptance for transportation aboard an aircraft to, as soon as practical, obtain the following information and report the discrepancy:

- A. Name and telephone number of the person reporting the discrepancy.
- B. Name of the aircraft operator.
- C. Specific location of the shipment concerned.

- D. Name of the shipper.
- E. Nature of the discrepancy.
- F. Address of the shipper or person responsible for the discrepancy, if known.

8.1.3 Reporting Procedures – Passenger Only Carriage

MISC 49 CFR 175.31

The information obtained regarding a hazardous materials discrepancy will be collected by the Manager of Airport Operations & Safety Assurance, and the Vice President of Safety and Security. They will document all reports submitted by United Airlines in the secure P drive at:
P:\Stations\Hazmat\Undeclared Dangerous Goods Report.

- A. Mesa Airlines, Inc. accepts United Airlines procedures and information necessary to allow personnel to implement and maintain the FAA notification system contained in the United Airlines Flying Together website located at: <https://ft.ual.com/Corporate-Safety/Dangerous-Goods>.
- B. United Airlines' processes for reporting a hazardous materials discrepancy automatically forward the completed report to the Manager of Airport Operations and the FAA for review.

8.1.4 Reporting Procedures – Cargo Only Carriage

MISC 49 CFR 175.31

The information obtained regarding a hazardous materials discrepancy will be documented on the Hazardous Materials Discrepancy Report. The report is located on the Mesa Airlines, Inc. Technical Publications page at: <https://www.phmsa.dot.gov/hazmat-program-development/data-operations/incident-report-form>.

- A. For these occurrences, complete the report via the link above as soon as practical after the event, and within 48 hours.
- B. Once the report is submitted online, the Senior Vice President of Flight Operations (Director of Operations) and the Vice President of Safety and Security, or designee, will ensure the report is complete and forwarded to the FAA Regional Hazardous Materials Office by email: 9-AWA-AXH-175-31CargoNotifications@faa.gov.
- C. Contact SOC for any issues with filing a discrepancy report online. All reports not submitted online must be forwarded to CargoOps@mesa-air.com.

8.1.5 Record Keeping Requirements

Transmitted Hazardous Material Discrepancy Reports will be kept for a period of no less than 90 days.

Hazardous Materials Manual

8.2 Incidents

MISC 49 CFR 171.15

Flight crewmembers will ensure that SOC personnel are notified as quickly as possible anytime a hazardous materials incident occurs. SOC personnel will ensure the proper Mesa Airlines, Inc. leadership are notified of the incident and that the necessary information is collected when completing their emergency checklist(s) and the Vice President of Safety and Security will ensure timely notification is made to the appropriate regulatory entities as required by this chapter. [Refer to 1.2.8 "Contact Information"](#) for the SOC telephone number.

8.2.1 Overview

Any incident involving Hazardous Materials occurring during the course of transportation (including loading, unloading and temporary storage) must be reported in accordance with the requirements of this chapter if:

- A. As a direct result of hazardous materials:
 - 1. A person is killed.
 - 2. A person receives injuries requiring his or her admittance to a hospital.
 - 3. The general public is evacuated for one hour or more.
 - 4. A major transportation artery or facility is closed or shut down for one hour or more.
 - 5. The operational flight pattern or routine of an aircraft is altered.
- B. Fire, breakage, spillage or suspected radioactive contamination occurs involving a radioactive material.
- C. Fire, breakage, spillage or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste.
- D. There has been a release of a marine pollutant in a quantity exceeding 119 gallons (450 liters) for liquids or 882 lbs (400 kg) for solids.
- E. A situation exists of such nature (i.e. a continuing danger to life exists at the scene of the incident) that, in the judgment of the person in possession of the hazardous material, it should be reported to the National Response Center even though it does not meet other incident reporting criteria.
- F. Any time there is an unintentional release of hazardous materials from a package, container, tank, or similar, or when any quantity of hazardous waste has been discharged during transportation.
- G. There is an unintentional release of a hazardous material or the discharge of any quantity of hazardous waste.

- H. During transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat (i.e., an amount of heat sufficient to be dangerous to packaging or personal safety to include charring of packaging, melting of packaging, scorching of packaging, or other evidence) occurs as a direct result of a battery or battery-powered device.
- I. An undeclared hazardous material is discovered.

NOTE

If an undeclared hazardous material(s) is discovered in a passengers checked baggage and cargo and does not meet any other reportable criteria, [refer to "Discrepancies"](#).

8.3 Notification of Incidents

MISC 49 CFR 171.15 49 CFR 171.16

In all cases of incidents/accidents involving hazardous materials, the Vice President of Safety and Security will ensure that the appropriate regulatory agencies are informed of aircraft incidents/accidents involving hazardous materials using the procedures below. At foreign locations, this notification process will include those agencies which are equivalent to the Federal Aviation Administration (FAA), National Response Center and Centers for Disease Control (CDC) when appropriate.

8.3.1 Notification by Telephone

- A. As soon as practical, but no later than 12 hours after the occurrence of any incident listed in 49 CFR 171.15(b), the Vice President of Safety and Security, on behalf of Mesa Airlines, Inc., will ensure to provide notice by telephone to the National Response Center (NRC) on 800-424-8802 or 202-267-2675 or online at <http://www.nrc.uscg.mil>.
- B. Once the Vice President of Safety and Security has been made aware of the incident, they will ensure Mesa Airlines, Inc. Principal Hazardous Materials Inspector (PHI) is informed of the occurrence details within 12 hours.
- C. Each notice must include the following information:
 - 1. Name of the person reporting the incident.
 - 2. Name and address of the carrier represented by the reporter.
 - 3. Phone number where the person reporting the incident can be contacted.
 - 4. Date, time and location of the incident.
 - 5. The extent of injuries, if any.
 - 6. Class or division, proper shipping name, and quantity of hazardous materials involved, if such information is available.
 - 7. Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.
- D. Whenever notification by telephone is made or required by this section, the incident will require a Written Notification to be filed in accordance with the procedures in the ["Written Notification \(DOT Form F 5800.1\)"](#) section of this chapter.

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8.3.2 Written Notification (DOT Form F 5800.1)

Notification in writing of the occurrence of an incident must be made within 30 days after the occurrence of any incident listed in the "[Overview](#)" section of this chapter using the following procedures:

- A. Download DOT Hazardous Materials Incident Report Form F 5800.1 using the federally maintained website <https://www.phmsa.dot.gov/>.
- B. Consult all witnesses to the incident and report any and all applicable information collected.
- C. Upon completion of DOT Form F 5800.1, forward it by company email to the Vice President of Safety and Security.
- D. The Vice President of Safety and Security, or designee, will, within 30 days of the date of the discovery of the incident, forward the completed DOT Form F 5800.1 to:
 1. The FAA Regional Hazardous Materials Office via email:
9-AWA-AXH-Air5800-1Reports@faa.gov.
 2. Information Systems Manager, PHH-60, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, East Building, 1200 New Jersey Ave., SE., Washington, DC 20590-0001, or an electronic Hazardous Material Incident Report to the Information System Manager, PHH-60, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, DC 20590-0001 at <https://www.phmsa.dot.gov/>.

8.3.2.1 Record Storage Requirements

The Vice President of Safety and Security will ensure a copy of the completed DOT Form F 5800.1 will be kept on file at the Mesa Airlines, Inc. principal place of business for a period of no less than two years.

8.3.2.2 Record Update Requirements

- A. The completed Form DOT F 5800.1 must be updated within one year of the date of occurrence of the incident whenever:
 1. A death results from injury caused by a hazardous material.
 2. There was a misidentification of the hazardous material or package information on a prior incident report.
 3. Damage, loss or related cost that was not known when the initial incident report was filed becomes known.
 4. Damage, loss or related cost changes by \$25,000 or more, or 10% of the prior total estimate, whichever is greater.
- B. The Vice President of Safety and Security, or designee, will be responsible for any necessary update of completed DOT Form F 5800.1.
- C. Updated information will be transmitted using the procedures above.

8.4 Exceptions

MISC 49 CFR 171.16

Unless a telephone report is required under 49 CFR 171.15, the following incidents do not require an immediate telephone notification or written notification of the incident:

- A. A release of a minimal amount of hazardous material from:
 - 1. A vent, for materials for which venting is authorized;
 - 2. The routine operation of a seal, pump, compressor, or valve; or
 - 3. Connection or disconnection of loading or unloading lines, provided that the release does not result in property damage.
- B. An unintentional release of a hazardous material when:
 - 1. The material is a limited quantity material packaged under authorized exceptions in the 49 CFR 172.101 Hazardous Materials Table, excluding Class 7 (radioactive) material, or a Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9; and
 - 2. The material is released from a package having a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
 - 3. The total amount of material released is less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids; and
 - 4. The material is not offered for transportation or transported by aircraft; the material is not hazardous waste; and the material is not undeclared hazardous materials.

8.5 Hazardous Materials Voluntary Disclosure Report Program

- A. This section was developed in accordance with the FAA Advisory Circular, AC 121-37, as revised and other relevant portions of the CFR.
- B. Mesa Airlines, Inc. may voluntarily disclose if the Mesa Airlines, Inc personnel, or personnel on behalf of the Mesa Airlines, Inc. commits an apparent violation involving the offering, acceptance, or transportation of hazardous materials under the following regulations:
 - 1. 14 CFR Part 121, Subpart Z.
 - 2. 49 CFR 171.15, 171.16, 171.22-171.24 (including violation of the standards contained in the ICAO Technical Instructions).
 - 3. 49 CFR Parts 172, 173 and 175.
- C. The Manager of Cargo Operations, in conjunction with the Vice President of Safety and Security and the Senior Vice President of Flight Operations, will investigate any potential violations of regulations and determine whether the requirements for a voluntary disclosure have been met.

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- D. In order to qualify for the VDRP program, the FAA must be notified within 72 hours after detecting the violation, and before the FAA, or other regulatory entities, have learned of the violation by other means.
- E. For detailed guidelines on reporting hazardous materials voluntary disclosures, refer to the Mesa Airlines, Inc. *Safety Program Manual* (Manual #530). The Vice President of Safety and Security (119 DOS) has the authority and responsibility to file a hazardous materials VDRP on behalf of Mesa Airlines, Inc.

8.6 Reporting Requirements for Canada

NOTE

This is in addition to reporting to US authorities and only applies to irregularities that occur in Canada.

- A. Dangerous Goods Accident or Incident Report – Air (Section 8.9)
 - 1. **8.9 (1):** Subject to subsection (3), a person who is required by subsection 18(1) of the Act to report a release or anticipated release of dangerous goods that are being offered for transport, handled or transported at an aerodrome, at an air cargo facility or by aircraft must as soon as possible after a release or anticipated release, make a report if the dangerous goods are, or could be, in excess of the quantity set out in the following table:

Class	Quantity
1, 2, 3, 4, 5, 6, 8 or 9	Any quantity
7	A level of ionizing radiation greater than the level established in section 39 of the Packaging and Transport of Nuclear Substances Regulations, 2015

- 2. **8.9 (2):** The report referred to in subsection (1) must be made to CANUTEC, at 1-888-CANUTEC (1-888-226-8832) or 613-996-6666, and, in the case of dangerous goods included in Class 7, Radioactive Materials, to the Canadian Nuclear Safety Commission.
- 3. **8.9 (3):** The person is not required to make the report referred to in subsection (1) if the release or anticipated release does not result in any of the following:
 - a. The death or injury of a person;
 - b. Damage to property or to the environment;
 - c. Signs that the integrity of a means of containment has been compromised, including signs of fire, of breakage or of fluid or radiation leakage;
 - d. Serious jeopardy to persons on an aircraft or to the aircraft itself;
 - e. An evacuation of people or their shelter in place; or
 - f. The closure of an aerodrome, air cargo facility or runway.

B. Information To Be Included in a Dangerous Goods Accident or Incident Report – Air (Section 8.10)

1. **8.10:** A report referred to in section 8.9 must include the following information:
 - a. The name and contact information of the person making the report;
 - b. In the case of a release of dangerous goods, the date, time and geographic location of the release;
 - c. In the case of an anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release;
 - d. The name of the aircraft operator, aerodrome or air cargo facility;
 - e. The shipping name or UN number of the dangerous goods;
 - f. The quantity of dangerous goods that was in the means of containment before the release or anticipated release;
 - g. In the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released;
 - h. If applicable, the type of incident leading to the release or anticipated release;
 - i. A description of the means of containment containing the dangerous goods;
 - j. If applicable, the number of deaths and the number of persons who sustained injuries; and
 - k. If applicable, an estimate of the number of people evacuated or sheltered in place.

C. 30-Day Follow-up Report (Section 8.11)

8.11: A person who has made a report referred to in section 8.9, or the person's employer, must make a follow-up report in writing to the Minister within 30 days after the day on which the report was made.

D. Information To Be Included in a 30-Day Follow-up Report (Section 8.12)

1. **8.12:** A follow-up report referred to in section 8.11 must include the following information:
 - a. The name and contact information of the person making the report;
 - b. The names and contact information of the consignor, consignee and aircraft operator;
 - c. In the case of a release of dangerous goods, the date, time and geographic location of the release;
 - d. In the case of an anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release;
 - e. The classification of the dangerous goods;
 - f. The quantity of dangerous goods that was in the means of containment before the release or anticipated release;

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- g. In the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released;
 - h. A description of the means of containment containing the dangerous goods;
 - i. If applicable, a description of any failure of or damage to the means of containment;
 - j. Information about the events leading to the release or anticipated release of dangerous goods;
 - k. Information as to whether there was an explosion or fire;
 - l. The name and geographic location of any aerodrome, air cargo facility or runway that was closed, and the duration of the closure;
 - m. If applicable, an estimate of the number of people evacuated or sheltered in place, and the duration of the evacuation or shelter in place;
 - n. If applicable, the number of deaths and the number of persons who sustained injuries;
 - o. If applicable, the ERAP reference number;
 - p. The date on which the report referred to in section 8.9 was made;
 - q. An estimate of any financial loss incurred as a result of the release or anticipated release, and any emergency response costs or remediation costs related to it;
 - r. A description of the route by which the dangerous goods were to be transported, including the names of any aerodromes along the route;
 - s. A description of any serious jeopardy to persons on any aircraft or to the aircraft itself; and
 - t. A description of any damage to property or to the environment.
- E. 30-Day Follow-up Report – Notice and Retention of Report (Section 8.13)
- 1. **8.13 (1):** A person who has made a follow-up report referred to in section 8.11 must, as soon as possible, notify the Minister of any change to the information referred to in paragraph 8.12(e), (h), (i), (k), (n) or (q) that occurs within one year after the day on which the follow-up report was made.
 - 2. **8.13 (2):** The person must keep a copy of the report for two years after the day on which it is made.
 - 3. **8.13 (3):** The person must make the report available to an inspector within 15 days after the day on which the person receives a written request from the inspector.
- F. Undeclared or Misdeclared Dangerous Goods Report (Section 8.14)
- 1. **8.14:** A person must make a report to CANUTEC, at 1-888-CANUTEC (1-888-226-8832) or 613-996-6666, as soon as possible after discovering, at an aerodrome or air cargo facility or on board an aircraft, dangerous goods that are not accompanied by the documentation or dangerous goods marks set out for the dangerous goods in Parts 1 to 6 and 8 of the ICAO Technical Instructions.

G. Information To Be Included in an Undeclared or Misdeclared Dangerous Goods Report (Section 8.15)

1. **8.15:** A report referred to in section 8.14 must include the following information:
 - a. The name and contact information of the person making the report;
 - b. The name of the aircraft operator, aerodrome or air cargo facility;
 - c. The names and contact information of the consignor and consignee;
 - d. The date of the discovery of the dangerous goods;
 - e. The shipping name or UN number of the dangerous goods;
 - f. A description of the means of containment containing the dangerous goods;
 - g. The gross mass or capacity of the means of containment and, if applicable, the total number of means of containment; and
 - h. A description of the route by which the dangerous goods were to be transported, including the names of any aerodromes along the route.

H. Dangerous Goods Occurrence Report (ICAO) (Section 8.15.1)

1. **8.15.1:** A person must make a dangerous goods occurrence report (ICAO) to the Minister within seven days after discovering, at an aerodrome or air cargo facility or on board an aircraft, dangerous goods that have been transported on board an aircraft without
 - a. Being loaded, segregated or secured in accordance with Chapter 2 of Part 7 of the ICAO Technical Instructions; or
 - b. The Pilot-in-Command having been informed in accordance with section 7;4.1 of the ICAO Technical Instructions.

I. Information To Be Included in a Dangerous Goods Occurrence Report (ICAO) (Section 8.15.2)

1. **8.15.2:** A dangerous goods occurrence report (ICAO) referred to in section 8.15.1 must be in writing and include the following information:
 - a. The name and contact information of the person making the report;
 - b. The name of the aircraft operator, aerodrome or air cargo facility;
 - c. The names and contact information of the consignor and consignee;
 - d. The date of the discovery of the occurrence referred to in paragraph 8.15.1(a) or (b);
 - e. The shipping name or UN number of the dangerous goods;
 - f. A description of the means of containment containing the dangerous goods;
 - g. The gross mass or capacity of the means of containment and, if applicable, the total number of means of containment;
 - h. A description of the route by which the dangerous goods were, or were to be, transported, including the names of any aerodromes along the route; and
 - i. A detailed description of the circumstances that led to the discovery of the occurrence referred to in paragraph 8.15.1(a) or (b), as the case may be.

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8.7 Reporting Requirements for Mexico

NOTE

This is in addition to reporting to US authorities and only applies to irregularities that occur in Mexico.

For Hazmat irregularities that occur in Mexico, furnish the same information provided to the FAA to the below address/email.

México (MEX)
Director General Adjunto de Aviacion
Dirección General de Aeronáutica Civil
Boulevard Adolfo López
Mateos N° 1990 -2° Piso
Col. Los Alpes Tlacopac
Mexico, D. F.
C.P. 01010
MEXICO

Tel: +52 50 1164 08
Tel: +52 5 723 94 00 Ext. 18070

email: acanogal@sct.gob.mx

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Appendix A: Forms

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Appendix A: Forms

A.1 Hazardous Materials Markings, Labeling and Placarding Guide

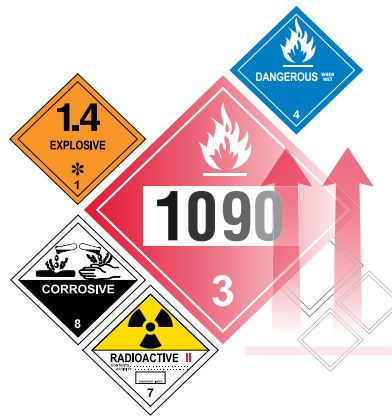


DOT CHART 17

Hazardous Materials Markings, Labeling and Placarding Guide

Refer to 49 CFR, Part 172:

- Marking - Subpart D
- Labeling - Subpart E
- Placarding - Subpart F



NOTE: This document is for general guidance only and should not be used to determine compliance with 49 CFR, Parts 100-185.

HAZARDOUS MATERIALS MARKINGS











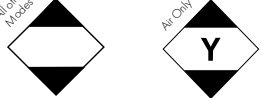



<p>Package Orientation (Red/Black)</p>  <p>§172.312(a)</p>	<p>Keep Away from Heat</p>  <p>§172.317</p>	<p>Overpack Mark</p>  <p>§173.25(a)(4)</p>	<p>Fumigant Marking</p>  <p>§172.302(g) and §173.9</p>	<p>Material Poisonous by Inhalation</p>  <p>§172.313(a)</p>
<p>Elevated Temperature Material</p>  <p>§172.325</p>	<p>UN ID Number Mark</p>  <p>§§172.332 and §172.336</p>	<p>Biological Substances, Category B</p>  <p>§173.199 (a)(5)</p>	<p>Lithium Battery Handling Mark</p>  <p>§173.185</p>	<p>Marine Pollutant</p>  <p>§172.322</p>
<p>Limited Quantity</p>  <p>§172.315</p>	<p>Biohazard Mark</p>  <p>§172.323</p>	<p>Petroleum Sour Crude Oil</p>  <p>§172.327</p>	<p>Excepted Quantity</p>  <p>§173.4a(g)</p>	

Figure A-1: Hazardous Materials Markings

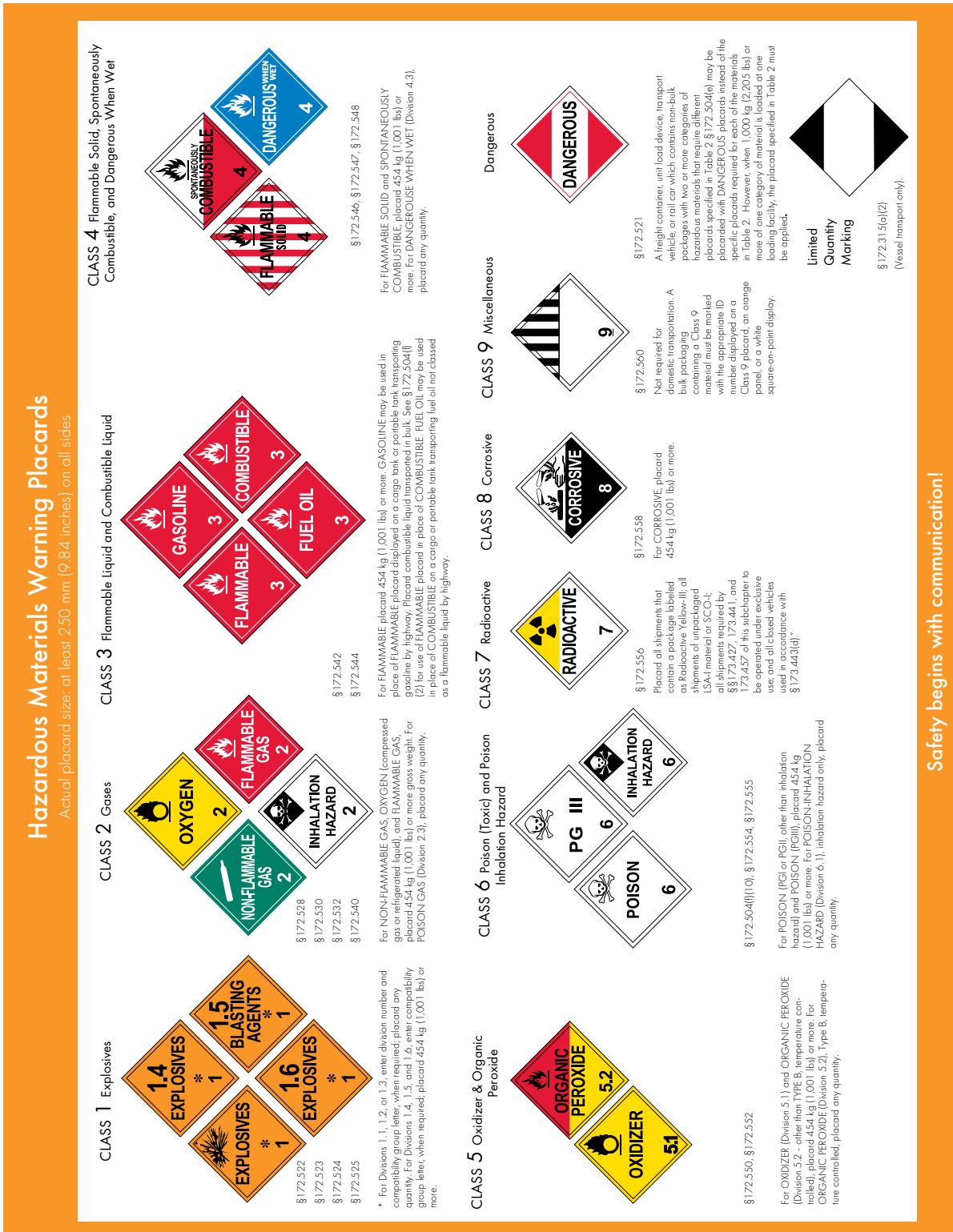
Hazardous Materials Warning Labels
 Actual label size: at least 100 mm (3.9 inches) on all sides

<p>CLASS 1 Explosives: Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6</p> <p style="text-align: right;">Subsidiary Risk Label</p>	<p>CLASS 2 Gases: Divisions 2.1, 2.2, 2.3</p>	<p>CLASS 3 Flammable liquid</p>	<p>CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet: Divisions 4.1, 4.2, 4.3</p>	<p>CLASS 5 Oxidizer, Organic Peroxide: Divisions 5.1 and 5.2</p>	<p>§ 172.405(b), § 172.415, § 172.416, § 172.417, § 172.419, § 172.420, § 172.422, § 172.423, § 172.424, § 172.427</p>
<p>CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance: Divisions 6.1 and 6.2</p>	<p>CLASS 7 Radioactive</p>	<p>CLASS 8 Corrosive</p>	<p>CLASS 9 Miscellaneous Hazardous Material</p>	<p>Cargo Aircraft Only</p> <p>Empty Label EMPTY</p>	<p>§ 172.405(c), § 172.429, § 172.430, § 172.432, § 172.436, § 172.438, § 172.440, § 172.441, § 172.442, § 172.444, § 172.446, § 172.447, § 172.448, § 172.450</p>

* Replace with compatibility group letter.
 ** Replace with division number and compatibility group letter.

For Regulated Medical Waste (RMW) or Infectious Substance label is not required on an outer packaging if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1030(g) (see § 173.134(c)). A bulk package of RMW must display a BIOHAZARD marking (see § 172.323(e)).

Figure A-2: Hazardous Materials Warning Labels



Safety begins with communication!

Figure A-3: Hazardous Materials Warning Placards

General Guidelines on Use of Warning Labels and Placards

LABELS

See 49 CFR, Part 172, Subpart E, for complete labeling regulations.

- The Hazardous Materials Table [§172.101, Col. 6] identifies the proper label(s) for the hazardous material listed.
- Any person who offers a hazardous material for transportation MUST label the package, if required [§172.400(a)].
- Labels may be affixed to packages when not required by regulations, provided each label represents a hazard of the material contained in the package [§172.401].
- For labeling mixed or consolidated packages, see §172.404.
- The appropriate hazard class or division number must be displayed in the lower corner of a primary and subsidiary hazard label [§172.402(b)].
- For classes 1,2,3,4,5,6, and 8, text indicating a hazard (e.g., "CORROSIVE") is NOT required on a primary or subsidiary label. The label must otherwise conform to Subpart E of Part 172 [§172.405].
- Labels must be printed on or affixed to the surface of the package near the proper shipping name marking [§172.406(a)].
- When primary and subsidiary labels are required, they must be displayed next to each other [§172.406(c)].
- For a package containing a Division 6.1, PG III material, the POISON label specified in §172.430 may be modified to display the text PG III instead of POISON or TOXIC. Also see §172.313(d) [§172.405(c)].
- The ORGANIC PEROXIDE label (§172.427) indicates that organic peroxides are highly flammable. The color of the border must be black and the color of the flame may be black or white (see §172.407(d)(2)(iii)).

PLACARDS

See 49 CFR, Part 172, Subpart F, for complete placarding regulations.

- Each person who offers for transportation or transports any hazardous material subject to the Hazardous Materials Regulations must comply with all applicable requirements of Subpart F [§172.500].
- Placards may be displayed for a hazardous material, even when not required, if the placarding otherwise conforms to the requirements of Subpart F of Part 172 [§172.502(c)].
- For other than Class 7 or the DANGEROUS placard, text indicating a hazard (e.g., "FLAMMABLE") is not required. Text may be omitted from the OXYGEN placard only if the specific ID number is displayed on the placard [§172.519(b)(3)].
- For a placard corresponding to the primary or subsidiary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard [§172.519(b)(4)].
- Except as otherwise provided, any bulk packaging, freight container, unit load device, transport vehicle or rail car containing any quantity of material listed in Table 1 must be placarded [§172.504].
- When the aggregate gross weight of all hazardous materials in non-bulk packages covered in Table 2 is less than 454 kg (1,001 lbs.), no placard is required on a transport vehicle or freight container when transported by highway or rail [§172.504(c)].
- Notes: See §172.504(f)(10) for placarding Division 6.1, PG III materials.
- Placarded loads require registration with USDOT. See §107.601 for registration regulations.

PLACARDING TABLES

[§172.504(e)]

TABLE 1

Category of material (Hazard Class or division number and additional description, as appropriate)	Placard name
1.1.....	EXPLOSIVES 1.1.....
1.2.....	EXPLOSIVES 1.2.....
1.3.....	EXPLOSIVES 1.3.....
2.3.....	POISON GAS.....
4.3.....	DANGEROUS WHEN WET.....
5.2 (Organic peroxide, Type B, liquid or solid, temperature controlled).....	ORGANIC PEROXIDE.....
6.1 (Materials poisonous by inhalation (see §171.8)).....	POISON INHALATION HAZARD.....
7 (Radioactive Yellow III label only).....	RADIOACTIVE ¹

¹ RADIOACTIVE placards are also required for: all shipments of unpackaged LSA-I material or SCO-I; all shipments required by §§173.427, 173.441, and 173.457 of this subchapter to be operated under exclusive use; and all closed vehicles used in accordance with §173.443(d).

TABLE 2

Category of material (Hazard Class or division number and additional description, as appropriate)	Placard name
1.4.....	EXPLOSIVES 1.4.....
1.5.....	EXPLOSIVES 1.5.....
1.6.....	EXPLOSIVES 1.6.....
2.1.....	FLAMMABLE GAS.....
2.2.....	NON-FLAMMABLE GAS.....
3.....	FLAMMABLE.....
Combustible Liquid.....	COMBUSTIBLE.....
4.1.....	FLAMMABLE SOLID.....
4.2.....	SPONTANEOUSLY COMBUSTIBLE.....
5.1.....	OXIDIZER.....
5.2 (Other than organic peroxide, Type B, liquid or solid, temperature controlled).....	ORGANIC PEROXIDE.....
6.1 (Other than materials poisonous by inhalation).....	POISON.....
6.2.....	(None).....
8.....	CORROSIVE.....
9.....	Class 9 (See §172.504(f)(9)).....

IDENTIFICATION NUMBER DISPLAYS



§172.332, 172.332(c)(4)

* Appropriate placard must be used with orange panel or white square-on-point configuration.

** For a COMBUSTIBLE placard used to display an identification number, the entire background below the white background for the identification number must be white during transportation by rail and may be white during transportation by highway.

IDENTIFICATION NUMBER MARKINGS ON ORANGE PANELS, WHITE SQUARES-ON-POINT, OR APPROPRIATE PLACARDS MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packagings; (2) Transport vehicles or freight containers containing 4,000 kg (8,820 lbs.) in non-bulk packages of only a single hazardous material having the same proper shipping name and identification number loaded at one facility and transport vehicle contains no other material, hazardous or otherwise; and (3) transport vehicles or freight containers containing 1,000 kg (2,205 lbs.) of non-bulk packages of materials poisonous by inhalation in Hazard Zone A or B. See §§172.301(a)(3), 172.313(c), 172.326, 172.328, 172.330, and 172.331.



§172.527

Square white background required for placard for highway-route-controlled quantity radioactive material and for rail shipment of certain explosives and poisons, and for flammable gas in a DOT 113 tank car [§172.507 and §172.510].

For additional information contact the Hazardous Materials Info Center

1-800-HMR-4922 (1-800-467-4922)

E-mail: infocntr@dot.gov <http://phmsa.dot.gov>

This Chart is available on line at the following link:

<https://www.phmsa.dot.gov/training/hazmat/publications>



U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration



CHART 17 Now Available AS FREE MOBILE APP



PHH50-0190-1121

Figure A-4: Warning Labels and Placards Use Guidelines



Hazardous Materials Manual

A.2 Pilot Notification Form



Hazardous Materials / Dangerous Goods Pilot Notification Form

Mesa Airlines, Inc.
d.b.a. United Express



Originating Station Code: _____ Final Destination Code: _____

Flight #: _____ Date of Flight: _____ Agent Name/Emp #: _____

Connecting flights:

Flight #: _____ Date of Flight: _____ Agent Name/Emp #: _____

Flight #: _____ Date of Flight: _____ Agent Name/Emp #: _____

Loading Agent: By signing above, you certify that the packages loaded have undergone an inspection to confirm that there are no leaks from or damage to the package.

Number of Packages	Proper Shipping Name	Hazard Class	UN Number	Packing Group	Net Quantity or Gross Weight	Location (From CLR)

NOTE: If shipping the same hazardous material (the same proper shipping name and identification number) in multiple packages, also note the quantity contained within the smallest and largest packages.

SHIPPER'S DECLARATION:

I hereby declare the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. I also declare that all of the applicable air transport requirements have been met.

Name of Shipper: _____

Phone Number of Shipper: _____

Signature of Shipper: _____

Date Signed: _____

<p>PILOT NOTIFICATION:</p> <p>Aircraft ID: N# _____</p> <p>Pilot Signature: _____</p>	<p>EMERGENCY CONTACT:</p> <p>Mesa SOC (888) 634-6372</p>
--	---

NOTES: (Additional details to be filled out by personnel working the flight)

Figure A-5: Pilot Notification Form



A.3 Special Load Notification to Captain

Page 2 of 2		SPECIAL LOADNOTIFICATION TO CAPTAIN											
Telephone number where a copy of this NOTOC can be obtained in case of emergency : +49 341 4499 1819													
STATION OF LOADING / UNLOADING : BGY / LEJ FLIGHT : BCS135 DATE : 14-Dec-2018 AIRCRAFTREG : DAEAA													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
USI	AIR WAYBILL number	Number of packages	UIN or ITN Number	Proper shipping name or article	DIASR / Division	Sub Hazard	PG or Category	NPT QTY/TI of each pack.	UJUL	UAU	FRG code	ULD Number	Position
				NO DANGEROUS GOODS IN ACCORDANCE TO REQUIREMENTS OF IATA DGR 5.5 ON BOARD									
OTHER SPECIAL LOAD													
DGT	AIR WAYBILL number	Number of packages	Contents		Temperature	Quantity / package		CODE	ULD Number		Position		
			NO SPECIAL LOAD ON BOARD										
ADDITIONAL INFORMATION													
DGT	AIR WAYBILL number	Content											

Responsible person for loading		Pilot in command	
<small>The items have been loaded according to the current loading manual of the carrying airline in the position indicated above. There is no evidence of any damage or leakage from the packages and ULDs loaded on the aircraft.</small>		Signature	<small>I certify that I have read the information contained herein</small> Signature

Printed on 14-Dec-2018 at 11:35:42 UTC
Revision Number: 1

Figure A-6: Special Load Notification to Captain (Page 1 of 2)

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Page of	NOTIFICATION TO CAPTAIN SUMMARY SHEET																	
STATION OF LOADING / UNLOADING :		/		FLIGHT :				DATE :		AIRCRAFTREG :								
GOODS SUMMARY																		
Position / Uld	CAO*	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	Division 6.1	Division 6.2	CLASS 7	CLASS 8	CLASS 9	DRY ICE CLASS 9 UN1845	UN3090 CLASS 9 Lithium Metal Batteries Section IA, IB & IC CAO	UN3091 CLASS 9 Lithium Metal Batteries Section I	UN3480 CLASS 9 Lithium Ion Batteries Section IA, IB & IC CAO	UN3481 CLASS 9 Lithium Ion Batteries Section I	SPECIAL LOAD	
Flight total ERG codes		0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	0 Kg	

All listed goods on this NOTOC have been accepted in accordance with the ICAO / IATA regulations and the required documentation. EU format (separating decimals with a ",")
 The transport document is created by: Thomas Goetz (DHL Express GHO) / Senior Expert Global Network Support .

*: CAO packages must be loaded so they are accessible during flight. CAO packages may be loaded inaccessible in a lower-deck class C compartment (aircraft type specific) providing the smoke detection/fire suppression system is serviceable.

This does not apply to:

- UN 3529, Engine, internal combustion, flammable gas powered or Engine, fuel cell, flammable gas powered or Machinery, internal combustion, flammable gas powered or Machinery, fuel cell, flammable gas powered;
- flammable liquids (Class 3), Packing Group III, other than those with a subsidiary hazard of Class 8 or UN 3528, Engine, internal combustion, flammable liquid powered or Engine, fuel cell, flammable liquid powered or Machinery, internal combustion, flammable liquid powered or Machinery, fuel cell, flammable liquid powered;
- toxic substances (Division 6.1) with no subsidiary hazard other than Class 3;
- infectious substances (Division 6.2);
- radioactive materials (Class 7);
- miscellaneous dangerous goods (Class 9).

Note: Lithium Batteries of class 9 may have additional special load requirements dependent upon the Operator – Refer to GSAM!

Figure A-7: Special Load Notification to Captain (Page 2 of 2)

A.4 B737 Hazardous Materials Quick Reference Guide

HAZMAT QUICK REFERENCE GUIDE

*Additional guidance can be found in the Mesa Airlines Hazardous Materials Manual

Carbon Dioxide - Dry Ice Class 9 (ICE)

*Loading of Dry Ice (ICE) together with Live Animals (AVI) on the main deck is forbidden.

B737 - Normal Operation Max Combined Qty 5500 lb (2495 kg)	5500 lb (2495 kg)	< Main Deck
989 lb (448 kg)	1190 lb (540 kg)	<< Lower Decks

Magnetized Materials Class 9 (MAG)

MAG is not allowed in the Forward Lower Compartment (FWD Hold).

Radioactive Material Class 7 (RRW & RRY)

*CAT I (RRW) does not require segregation, however they are not to be stowed on the Flight-Deck.

*CAT II & III (RRY) materials will be separated by passengers and crew by selecting one of the following loading combinations.

Max T.I. and allowed Loading Positions or Areas												
	1	2	3	4	5	6	7	8	9	10	11	FWD & AFT Holds
Allowed combination of positions	A	B	C	D	E	F	G	H	J	K	L	
Combination 1	No RRY			Max 50.0 TI together								No RRY Allowed
Combination 2	No RRY			Max 200.0 TI together								

Self-reactive Substances Class 4.1 (RFS)

Organic Peroxides Class 5.2 (ROP)

*Packages or ULDs containing shipments of self-reactive substances of Division 4.1 (RFS) and/or Organic Peroxides (ROP) of Division 5.2 must be protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas during the course of loading.

Lithium Batteries Class 9

*Lithium Batteries labeled as followed may only be loaded on the Main Deck of the aircraft:

RBI (UN3480 / Section IA/IB)	RBM (3090) / Section IA/IB
RLI (UN3081 / Section I)	RLM (UN3091 Section I)

*Lithium batteries are classified as Class 9 materials; nonetheless, most lithium batteries are currently classified as **excepted** from many provisions of the HMR, including the requirement to be listed on a Notification to the Pilot in Command (NOTOC) when packed according to **Section II**.

See **NOTOC Exceptions for Li. Batteries at top of page**

DG NOT REQUIRED to appear on Notification to Capt. (NOTOC)

- Dangerous Goods in Excepted Quantities (REQ)
- UN2807 Magnetized material (MAG)
- UN3245 Genetically modified micro-organisms & organisms
- UN3372 Biological substance, **Category B (RDS)**
- UN2908, UN2909, UN2910, UN2911 Radioactive material, excepted packages (RRE)
- UN3164 Articles, pressurized, hydraulic, pneumatic (non-flammable gas; meeting the requirements of PI 208(a) (RNG))
- UN3090, UN3091 Lithium metal batteries meeting the requirements of **Sec II of PI 968 (EBM) and 969, 970 (ELM)**
- UN3480, UN3481 Lithium ion batteries meeting the requirements of **Sec II of PI 965 (EBI) and 966, 967 (ELI)**

Cargo—Interchange Message Procedures (IMP) Codes

AOG	Parts for Aircraft on Ground	HUM	Human remains in coffin
AVI	Live Animals	LHO	Living human organs / blood
EAT	Edible materials, food stuffs	PEF	Flowers
FIL	Undeveloped films	PEM	Meat
HEG	Hatching eggs	PEP	Fruit and vegetables

Hazmat—Interchange Message Procedures (IMP) Codes

CLASS	CODES	DESCRIPTION
1	REX	Forbidden Explosives, Div 1.1, 1.2, 1.3, 1.4F, 1.5 & 1.6
1.3C	RCX	Explosives 1.3C
1.3G	RGX	Explosives 1.3G
1.4B	RXB	Explosives 1.4B
1.4C	RXC	Explosives 1.4C
1.4D	RXD	Explosives 1.4D
1.4E	RXE	Explosives 1.4E
1.4G	RXG	Explosives 1.4G
1.4S	RXS	Explosives 1.4S
2.1	RFG	Flammable Gas
2.2	RCL	Croogenic Liquid (Packing Instruction 202)
2.2	RNG	Non-Flammable Non-toxic Gas
2.3	RPG	Toxic Gas
3	RFL	Flammable Liquid
4.1	RFS	Flammable Solid
4.2	RSC	Spontaneously Combustible
4.3	RFW	Dangerous When Wet
5.1	ROX	Oxidizer
5.2	ROP	Organic Peroxide
6.1	RPB	Toxic Substance
6.2	RDS	Biological Substance, Category B (UN3373)
6.2	RIS	Infectious Substance (UN 2814 or UN 2900)
7	RRW	Radioactive Material Category I - White
7	RRY	Radioactive Material Category II - Yellow & III - Yellow
7	RRE	Excepted Packages of Radioactive Material
8	RCM	Corrosive
9	MAG	Magnetized Material
9	RMD	Miscellaneous Dangerous Goods
9	RSB	Polymeric Beads/Plastics Moulding Compound (PI 957)
9	ICE	Carbon Dioxide, Solid (Dry Ice)
9	RLI	Fully Regulated Li. Ion Bat. (CL 9, UN3481) Sec. I of PI 966 & 967
9	RLM	Fully Regulated Li. Metal Bat. (CL 9, UN3091) Sec. I of PI 969 & 970
9	EBI	Lithium Ion Batteries excepted as per Section II of PI 965
9	EBM	Lithium Metal Batteries excepted as per Section II of PI 968
9	ELI	Lithium Ion Batteries excepted as per Section II of PI 966 & 967
9	ELM	Lithium Metal Batteries excepted as per Section II of PI 969 & 970
9	RBM	Fully Regulated Li. Metal Bat. (CL 9, UN3090) Sec. IA & IB of PI 968
9	RBI	Fully Regulated Li. Ion Bat. (CL 9, UN3480) Sec. IA & IB of PI 965

Figure A-8: HAZMAT Quick Reference Guide

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Index of References

14 CFR	121.1001.....	3.1	Misc	49 CFR 175.10(a)(9).....	6.16
14 CFR	121.1003.....	3.1	Misc	49 CFR 175.20	2.1
14 CFR	121.1003.....	3.3	Misc	49 CFR 175.25	2.2
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Misc	49 CFR 175.10(a)(8).....	6.17			

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Bulletin 21-01: United Express UN3373 Transport

This bulletin describes the United Express UN3373 Transport of COVID-19 test samples as UN3373 procedures.

1. United Express UN3373 Transport

- A. Effective immediately, Mesa Airlines, Inc. flights operating as United Express are approved to transport COVID-19 test samples as UN3373.
- B. A small subset of customers may request to gate check items that contain COVID-19 test samples. These customers are often affiliated with sports teams, such as team doctors, lab technicians and contract couriers. After consultation with the DOT and United, we are authorized and will accept COVID-19 test samples only as gate-checked baggage on domestic mainline routes. COVID-19 test samples are prohibited for transport on international routes. These items may NOT enter the cabin and must be transported in the cargo hold.
- C. Kits containing live COVID test samples are never permitted to travel in a customer or crewmember's carry-on baggage or otherwise allowed in the passenger cabin or on the flight deck. Handling as a gate check ensures that the item does not get separated from the courier in the event of irregular operations.

FAA APPROVAL

STANLEY J MARKOVICH  Digitally signed by STANLEY J MARKOVICH
Date: 2021.04.02 13:21:03 -05'00'

Principal Operations Inspector, Phoenix CMO, WP37

D. Items containing COVID-19 test samples may only be accepted when the following requirements are met:

1. The samples must be packed in a rigid outer package (i.e., hard-sided box, that is closed and sealed. They must not be contained inside customer's bag).



2. A black/white diamond depicting **UN3373** with the verbiage "**BIOLOGICAL SUBSTANCE, CATEGORY B**" must be displayed on the outside of the box.



3. An emergency contact name and phone number must be marked/displayed on the outside of the box.

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2. Procedure for Acceptance

- A. Every customer gate checking these items will have an approval letter detailing the policy and procedure for acceptance. This letter will include instructions and a point of reference for the Customer Service Representative (CSR).
- B. CSR must affix a pink **SPECIAL HANDLING** tag to the handle of the box.

The image shows a pink and white 'SPECIAL HANDLING' tag for United Airlines. The tag includes a 'GLUE AREA' at the top, checkboxes for 'Existing Damage' and 'Fragile & Unusually Packaged', a 'Customer Signature' line with an 'X' mark, and a 'Deliver to Boarding Area at' section with a table for 'Final Dest.', 'Via', and 'Airline Flight'. Below the table are fields for 'Customer Name', 'Seat No.', and 'Final Destination'. At the bottom of the tag is a 'CLAIM CHECK' section. Below the tag is a large black-bordered box containing the text 'Special Handling'.

- C. The box will be left at the end of the jetbridge prior to the customer entering the aircraft.
- D. The box will be returned to the jetbridge upon arrival, including at connection points.
- E. The box will be loaded in either the Front or Rear Cargo bay and the location notated on the CLR as well as include in the remarks section that UN3373 is being transported.

If the requirements for acceptance are not met, the shipment cannot be accepted for travel.

3. Reporting Requirements

The following instances require immediate reporting to Mesa Airlines, Inc. Systems Operations Control and the United Customer Service Representative. Recognition of Hazardous Materials as carry-on baggage and the process for identifying and reporting of such instances can be found in Chapter 2 of the Mesa Airlines, Inc. *Flight Attendant Manual*, “Hazardous Materials” and Chapter 2 of the Mesa Airlines, Inc. *General Operations Manual*, “Hazardous Material Notification.”

- A. Incorrect or unacceptable packaging or labeling of box.
- B. Leaks/spills or any indication that the box is not sealed.
- C. Any instance where the box is discovered in the passenger cabin or on the flight deck.
- D. Any instance where an incorrect/missing handling tag is discovered.
- E. Any failure of the proper remarks notated on the CLR identifying that UN3373 is onboard.

4. Notification Requirements

The following notification procedures shall be followed in the event that any reporting requirements are met as outlined above.

- A. Flight Attendants
 - 1. Immediately notify the PIC.
 - 2. For Leaks/Spills – Quarantine the area and move all passengers as far away from the area as possible. DO NOT make any attempt to clean leaks and spills.
 - 3. Complete a Cabin Incident Report as required per the Mesa Airlines, Inc. *Flight Attendant Manual*, Chapter 2.
- B. Pilots
 - 1. Immediately notify SOC. Refer to Chapter 2 of the Mesa Airlines, Inc. *General Operations Manual*, “Hazardous Material Notification.”
 - a. SOC will make all applicable notifications required by 49 CFR 171.15 and 49 171.16, referring to the Mesa Airlines, Inc. *Hazardous Materials Manual*, Chapter 8, Sections 8.2 – 8.3.
 - 2. Immediately notify the United Customer Service Representative and United Gate Agent.
 - 3. For Leaks/Spills – Ensure that the affected area is quarantined and that all passengers have been moved as far away from the area as possible. DO NOT make any attempt to clean leaks and spills.
 - 4. Complete an Occurrence Report as required per the Mesa Airlines, Inc. *General Operations Manual*, Chapter 13.

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5. Conditions and Limitations

- A. **UNUSED** COVID tests and test materials are permitted to be transported as both carry-on or checked baggage in accordance with normal baggage guidance with what is accepted by the TSA in checked and carry-on luggage.
- B. **USED** test samples must be properly identified, packaged, transported and shipped in compliance with Hazardous Materials Regulations (HMR)/IATA DGR as UN3373, which is “**BIOLOGICAL SUBSTANCE, CATEGORY B**” and as outlined in the Mesa Airlines, Inc. *Hazardous Materials Manual* (Manual #330). Passengers and crew are forbidden from carrying these samples in the cabin or flight deck of the aircraft.
- C. UN3373 is a hazardous material and no person may carry a hazardous material in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft in accordance with 49 CFR 173.199 and 49 CFR 175.75. International regulations also prohibit UN3373 to be offered as carry-on or checked baggage.
- D. COVID tests loaded onboard a Mesa Airlines, Inc. flight will be notated within the remarks section of the CLR as notification to the crew that UN3373 is being transported.
- E. Passengers are to be directed to the flight's Customer Service Representative for any questions pertaining to the carriage of UN3373.

END

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