



**DANGEROUS GOODS PROCEDURES MANUAL
(GROUND PERSONNEL)
DOCUMENT NO. UPS75125
HIGHLIGHTS OF CHANGES**

MANUAL TITLE DANGEROUS GOODS PROCEDURES MANUAL (GROUND PERSONNEL) **DOCUMENT NUMBER** UPS75125
REVISION NO. 16 **REVISION DATE** 09/26/2014

REFERENCE	CHANGE TYPE	DESCRIPTION
01.01.01.01	Revised	Updated phone number for HMSC help desk and hours of operation per TPCR 0-DGPM-14-0287.
01.01.01.05	Revised	Updated 'Record of Training' section by removing obsolete training and added new training per TPCR 0-DGPM-14-0290.
01.01.01.09	Revised	Updated name of Airline Audit team to Airline Internal Evaluation Team and where the checklist can be located per TPCR 0-DGPM-14-0291.
02.01.01.01	Revised	Aligned definition to match ICAO and reference per TPCR 0-DGPM-14-0295.
03.01.01.02	Revised	Updated the airports list for dry ice limits on UPS aircraft per TPCR 0-DGPM-14-0296.
03.01.01.06	Revised	Removed ORM-D-AIR from the hazardous materials list per TPCR 0-DGPM-14-0297.
03.01.01.08	Revised	Added information about NOTOC being available to the next scheduled arrival airport via HMMS per TPCR 0-DGPM-0292.
03.01.01.10	Revised	Updated the exception list for crewmembers and jumpseaters per TPCR 0-DGPM-14-0294.
04.01.02.02	Revised	Removed Division 6.2 from the prohibited or restricted ADG service area per TPCR 0-DGPM-14-0470.
05.01.01.07	Revised	Added 'Cargo Aircraft Only' indication statement for DG Load Tag per TPCR 0-DGPM-14-0469.
05.01.01.10	Revised	Updated section to reference correct chapter in Flight Operations Manual (FOM) per TPCR 0-DGPM-14-0469.

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Revision 16
09/26/2014**

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**DANGEROUS GOODS PROCEDURES MANUAL
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LIST OF EFFECTIVE SECTIONS**

FAA APPROVED 09/23/2014

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A/m	Amperes per Meter
AC	Advisory Circular
ADG	Air Dangerous Goods
AFMAN	Air Force Manual (U.S.)
ARFF	Aircraft Rescue and Fire Fighting
ATA	Air Transport Association
ATC	Air Traffic Control
C	Celsius
CAO	Cargo Aircraft Only
CFR	Code of Federal Regulations
CMO	Certificate Management Office
COMAT	Company Materials
DG	Dangerous Goods
DGPM	Dangerous Goods Procedures Manual
DGR	Dangerous Goods Regulations
DoD	Department of Defense
DOT	Department of Transportation
ERG	Emergency Response Guide
F	Fahrenheit
FAA	Federal Aviation Administration
GEMS	Global Employee Management System
GMM	General Maintenance Manual
GOM	Ground Operations Manual
GSE	Ground Support Equipment
HAZWOPER	Hazardous Waste Operations and Emergency Response
HMMS	Hazardous Materials Management System
HMR	Hazardous Materials Regulations
HMSC	Hazmat Support Center
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IDG	International Dangerous Goods
IOSA	IATA Operational Safety Audit
kg	Kilograms
L	Liters
lbs	Pounds
LPM	Load Planning Manual
MIPS	Material Inventory Planning System
ml	Milliliters
N.O.S.	Not Otherwise Specified
NOTOC	Notification to Captain
NRC	National Response Center
OAM	Operation and Administration Manual
OpSpec	Operations Specification
PHMSA	Pipeline and Hazardous Materials Safety Administration

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POI	Principal Operations Inspector
RQ	Reportable Quantity
SALT	Service Awareness Level Tests
TPCR	Technical Publications Change Request
UCHPM	UPSCO Cargo Handling Procedures Manual
ULD	Unit Load Device
UPS	United Parcel Service
UPSCO	United Parcel Service Company



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01.01.01 Overview

01.01.01.01 General

NOTE: Throughout this manual, United Parcel Service Co. is referred to by the abbreviation "UPSCO."

Purpose

The purpose of this manual is to establish and direct hazardous material compliance requirements for UPS Airlines. Procedures are developed and implemented by the Air Dangerous Goods Compliance function within the Hazardous Materials Support Center.

Procedures directed by this manual are documented and communicated in accordance with Chapter 04 and Chapter 05 of the Operation and Administration Manual (OAM) and through supporting company manuals and dangerous goods employee training manuals.

Questions about the contents of this manual should be directed to:

UPS Air Dangerous Goods Compliance

6406 Grade Lane

WFF, West Mezzanine

Louisville, KY 40213

U.S.A.

Telephone: 502-359-2950 or (ATLAS) 5-350-2950
502-359-2954 or (ATLAS) 5-350-2954
502-359-2965 or (ATLAS) 5-350-2965
Telefax: 502-359-2901 or (ATLAS) 350-2901

Change Requests

Revisions to this manual are accomplished by completing a Technical Publications Change Request (TPCR) per GMM Chapter 01 and must be approved by the appropriate Certificate Management Office (CMO). TPCRs should be routed to Technical Publications – SDF.

Emergency Notification

The Hazmat Support Center may be contacted at 502-359-2900 or 1-800-554-9964 (Option 1) during hours of operation to notify ADG Compliance management. The HMSC operates continuously Sunday through Saturday 24 hours a day (including holidays).

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01.01.01.02 Responsibility and Authority

Manual

The Director of Operations has the overall responsibility of the content, revision, currency and consistency of the Dangerous Goods Procedures Manual (DGPM).

The Air Dangerous Goods Division Manager has been delegated the authority for the content, revision, currency and consistency of the DGPM.

Hazardous Materials

The Director of Operations has responsibility for the management and quality of the UPS Hazardous Materials Program and processes.

The Air Dangerous Goods (ADG) Division Manager has been delegated the authority for the UPS Hazardous Materials Program and processes.

**01.01.01.03 ADG Division Manager
OpSpec A006, A055**

The ADG Division Manager is expected to know and perform all functions of the operation/department. He is responsible for the training, support, and accountability of his people. He is also responsible for all daily functions to maintain open communications in regard to dangerous goods policies and procedures.

Function

Administers and provides operational support and training to UPS personnel and to contract vendors as required to ensure compliance with applicable UPS hazardous materials policies and procedures.

Responsibilities

- Has authority to establish and/or modify policies and procedures and for insuring the quality of the hazardous materials program.
- Review and approve changes to airline manuals/documents related to hazardous materials procedures and advise the UPSCO Director of Operations of changes that may affect flight operations.
- Monitor compliance by UPS and vendor personnel of all hazardous materials procedures as published in FAA approved or accepted UPSCO Manuals.
- Develop and administer the FAA approved UPS Dangerous Goods Training Program.
- Monitor UPS Audit and Safety Programs as related to hazardous materials procedures and operations.



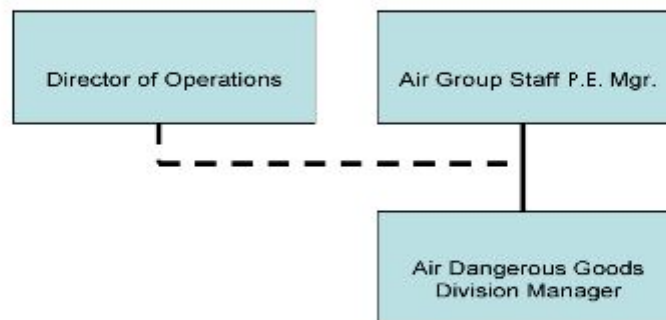
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Reportability

Reports to the UPSCO Director of Operations for FAA regulatory purposes (OpSpec A006 and A055). Reports to the Air Group Plant Engineering Group for administrative and operational purposes.

Air Dangerous Goods



This organization structure is valid unless superseded by an FAA approved Operations and Administration Manual (OAM).

Delegation of Authority

When absent, the Air Dangerous Goods Division Manager will designate a management person from his department to perform his duties.

Qualifications

- Must have fundamental understanding of computers.
- Must have fundamental knowledge of the following regulations:
 - Federal Aviation Regulations
 - 49 Code of Federal Regulations
 - ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air
 - IATA Dangerous Goods Regulations
 - Must maintain an high level of expertise in all UPS hazmat training programs.
- Must have problem-solving abilities.



01.01.01.04 Regulations

**14 CFR 121.1001, 121.1002, 121.1003, 121.1004, 121.1005, 121.1006, 121.1007;
49 CFR Part 171 Subpart C**

- U.S. Federal Aviation Regulations: 14 CFR 121.1001 – 121.1007. FAA requires approval of any U.S. air carrier's dangerous goods training program, and imposes a requirement for recurrent training every 24 months.
- U.S. Hazardous Materials Regulations: 49 CFR Parts 100-185. For UPSCO and any other U.S. air carrier, all commerce in dangerous goods must be authorized by regulations in the U.S. DOT's HMR.
- ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air. This international publication is produced by the International Civil Aviation Organization, which is a United Nations body with authority over international aviation issues. This document has the force of law, and U.S. shippers and air carriers are authorized (if appropriate) to conduct commerce in dangerous goods in accordance with the ICAO Technical Instructions, as limited by restrictions in 49 CFR Part 171 Subpart C. More detail is provided elsewhere in this manual about the UPS decisions concerning adherence to international procedures.
- IATA Dangerous Goods Regulations. This manual is published by the International Air Transport Association, a trade association of airlines, including UPSCO. It is based on the ICAO Technical Instructions but has additional procedural and safety restrictions recognized by the air carrier industry.

01.01.01.05 Government Approvals

Approval to engage in air commerce with dangerous goods is required by many governments.

U.S. FAA Approval of Training. 14 CFR Part 121 requires FAA approval of the training program for a U.S. certificated air carrier. UPSCO received this approval May 12, 1993.

An outline of the UPSCO training program, constituting the FAA-approved curriculum for UPSCO, is contained in the UPSCO manual entitled "Dangerous Goods Training Manual (Ground Personnel)."

The "Dangerous Goods Training Manual (Ground Personnel)", and any amendments to it, must be approved by FAA through the office of the Principal Operations Inspector in coordination with the Hazardous Materials function within the FAA Southern Region. A copy of this manual is maintained by FAA-POI, by the FAA Southern Region, and by the Air Dangerous Goods Compliance function. It is used as the basis of all training for Acceptance Auditors and Air/Ground Handlers within the UPS system.

Approval of other governments may be required and must be secured and maintained for every UPSCO gateway to enable movement of COMAT hazmat. Failure to obtain and maintain such approvals will reduce UPSCO's ability to move aircraft maintenance supplies into and out of its gateways (requiring reliance on other carriers), and will prohibit any consideration of commercial dangerous goods services.



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Record of Training

NOTE: All employees of United Parcel Service receive general awareness training regarding hazardous materials during their orientation. This training is administered through the Human Resources department and is not associated with the job-specific training of the UPSCO program.

Documentation of training conducted under the FAA-approved program will be maintained as follows.

- Domestic U.S. Operations: Except as noted below, for UPSCO personnel, the central UPS Human Resources computer system, designated GEMS (Global Employee Management System), is used to record training conducted under the FAA-approved training program within the domestic U.S. DG training records may be accessed from this system by contacting the ADG Compliance function or a Region/District Regulated Goods Coordinator. The input into the GEMS system is the UPS Airline Dangerous Goods Training Roster. This roster is sent to the HMSC Louisville at the completion of the training, for key entry. A copy of the roster should be maintained, by the Gateway or District, until the training is verified in the GEMS system. The GEMS record contains the following data.
 - Name of Employee
 - Issue Date (Date of Training)
 - Issued By (Training Facilitator)
 - License/Certif Code (Level of Training)
 - DGUS2 (Initial DG Region Trainer – Active)
 - DGUS2D (Initial DG Region Trainer – Deactive)
 - RDGUS2 (Recurrent DG Region Trainer – Active)
 - RGUS2D (Recurrent DG Region Trainer – Deactive)
 - DGUS3 (Initial DG District Trainer – Active)
 - DGUS3D (Initial DG District Trainer – Deactive)
 - RDGUS3 (Recurrent DG District Trainer – Active)
 - RGUS3D (Recurrent DG District Trainer – Deactive)
 - DGUS4 (Initial DG Acceptance Auditor – Active)
 - DGUS4D (Initial DG Acceptance Auditor – Deactive)
 - RDGUS4 (Recurrent DG Acceptance Auditor – Active)
 - RDGUS4D (Recurrent DG Acceptance Auditor – Deactive)



- DGBL5 (Initial DG Basic Loader – Active)
- DGBL5D (Initial DG Basic Loader – Deactive)
- RDGBL5 (Recurrent DG Basic Loader – Active)
- RDGBL5D (Recurrent DG Basic Loader – Deactive)
- DGIL5 (Initial Intermediate Loader – Active)
- DGIL5D (Initial Intermediate Loader – Deactive)
- RDGIL5 (Recurrent Intermediate Loader – Active)
- RDGIL5D (Recurrent Intermediate Loader – Deactive)
- DGRL5 (Initial DG Advanced Loader – Active)
- DGRL5D (Initial DG Advanced Loader – Deactive)
- RDGRL5 (Recurrent DG Advanced Loader – Active)
- RDGRL5D (Recurrent DG Advanced Loader – Deactive)
- ADG6 (Initial COMAT Hazmat Trainer – Active)
- ADG6D (Initial COMAT Hazmat Trainer – Deactive)
- RDG6 (Recurrent COMAT Hazmat Trainer – Active)
- RDG6D (Recurrent COMAT Hazmat Trainer – Deactive)
- ADG7 (Initial COMAT/Hazmat Shipper – Active)
- ADG7D (Initial COMAT/Hazmat Shipper – Deactive)
- RDG7 (Recurrent COMAT/Hazmat Shipper – Active)
- RDG7D (Recurrent COMAT/Hazmat Shipper – Deactive)
- HMG (Initial Hazardous Materials General – Active)
- HMGD (Initial Hazardous Materials General – Deactive)
- RHMG (Recurrent Hazardous Materials General – Active)
- RHMGD (Recurrent Hazardous Materials General – Deactive)
- OHR (Initial Overview Hazmat Responsibility – Active)
- OHRD (Initial Overview Hazmat Responsibility – Deactive)
- ROHR (Recurrent Overview Hazmat Responsibility – Active)
- ROHRD (Recurrent Overview Hazmat Responsibility – Deactive)
- DGINT2 (Initial International Region Trainer – Active)
- DGINT2D (Initial International Region Trainer – Deactive)
- RDGINT2 (Recurrent International Region Trainer – Active)



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- RDGINT2D (Recurrent International Region Trainer – Deactive)
 - DGINT3 (Initial International District Trainer – Active)
 - DGINT3D (Initial International District Trainer – Deactive)
 - RDGINT3 (Recurrent International District Trainer – Active)
 - RDGINT3D (Recurrent International Distirct Trainer – Deactive)
 - DGINT4 (Initial International Acceptance Auditor – Active)
 - DGINT4D (Initial International Acceptance Auditor – Deactive)
 - RDGINT4 (Recurrent International Acceptance Auditor – Active)
 - RDGINT4D (Recurrent International Acceptance Auditor – Deactive)
- |
- DGAF2 (Initial Air Freight/Air Cargo Region Trainer – Active)
 - DGAF2D (Initial Air Freight/Air Cargo Region Trainer – Deactive)
 - RDGAF2 (Recurrent Air Freight/Air Cargo Region Trainer – Active)
 - RGAF2D (Recurrent Air Freight/Air Cargo Region Trainer – Deactive)
 - DGAF3 (Initial Air Freight/Air Cargo District Trainer – Active)
 - DGAF3D (Initial Air Freight/Air Cargo District Trainer – Deactive)
 - RDGAF3 (Recurrent Air Freight/Air Cargo District Trainer – Active)
 - RGAF3D (Recurrent Air Freight/Air Cargo District Trainier – Deactive)
 - DGAF4 (Initial Air Freight/Air Cargo Acceptance Auditor – Active)
 - DGAF4D (Initial Air Freight/Air Cargo Acceptance Auditor – Deactive)
 - RDGAF4 (Recurrent Air Freight/Air Cargo Acceptance Auditor – Active)
 - RDGAF4D (Recurrent Air Freight/Air Cargo Acceptance Auditor – Deactive)
- |
- DGBAF5 (Initial Basic Air Freight/Air Cargo Loader - Active)
- |
- DGBAF5D (Initial Basic Air Freight/Air Cargo Loader - Deactive)
 - DGAF5 (Initial Air Freight/Air Cargo Loader – Active)
 - DGAF5D (Initial Air Freight/Air Cargo Loader – Deactive)
 - RDGAF5 (Recurrent Air Freight/Air Cargo Loader – Active)
- |
- RDGBAF5 (Recurrent Basic Air Freight/Air Cargo Loader - Active)
 - RDGAF5D (Recurrent Air Freight/Air Cargo Loader – Deactive)
- |
- RDGBAF5D (Recurrent Basic Air Freight/Air Cargo Loader – Deactive)
 - HRR (Initial Recognize and Reject – Active)

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- HRRD (Initial Recognize and Reject – Deactive)
 - RHRR (Recurrent Recognize and Reject – Active)
 - RHRRD (Recurrent Recognize and Reject – Deactive)
- Canada Operations: Canada will utilize the GEMS recording system identical to U.S. Domestic Operations.
 - Aircraft Maintenance: Records for aircraft maintenance personnel trained in the COMAT hazmat shipping procedures are recorded in the GEMS system.
 - Operations Outside the U.S. (Other Than Canada): Training conducted for employees at locations outside the U.S. will be documented through the use of training rosters or training certificates, maintained at the operating facilities. The use of certificates or rosters will depend on the requirements of local legislation.
 - Authorizations of Trainers: The level of training as indicated by GEMS Code dictates the extent to which a trainer may train other trainers or employees.
 - DG Region Trainer (DGUS2) can train: DG Region Trainer (DGUS2); DG District Trainer (DGUS3); DG Acceptance Auditor (DGUS4); DG Basic Loader (DGBL5); DG Intermediate Loader (DGIL5); and DG Advanced Loader (DGRL5).
 - DG District Trainer (DGUS3) can train: DG Acceptance Auditor (DGUS4); DG Basic Loader (DGBL5); DG Intermediate Loader (DGIL5); and DG Advanced Loader (DGRL5).
 - International Region Trainer (DGINT2) can train: International Region Trainer (DGINT2); International District Trainer (DGINT3); International Acceptance Auditor (DGINT4); DG Basic Loader (DGBL5); DG Intermediate Loader (DGIL5); and DG Advanced Loader (DGRL5).
 - International District Trainer (DGINT3) can train: International Acceptance Auditor (DGINT4); DG Basic Loader (DGBL5); DG Intermediate Loader (DGIL5); and DG Advanced Loader (DGRL5).
 - Air Freight/Air Cargo Region Trainer (DGAF2) can train: Air Freight/Air Cargo Region Trainer (DGAF2); Air Freight/Air Cargo District Trainer (DGAF3); Air Freight/Air Cargo Acceptance Auditor (DGAF4); Air Freight/Air Cargo Loader (DGAF5); and Basic Air Freight/Air Cargo Loader (DGBAF5).
 - Air Freight/Air Cargo District Trainer (DGAF3) can train: Air Freight/Air Cargo Acceptance Auditor (DGAF4); Air Freight/Air Cargo Loader (DGAF5); and Basic Air Freight/Air Cargo Loader (DGBAF5).
 - COMAT Hazmat Trainer (ADG6) can train: COMAT Hazmat Trainer (ADG6); COMAT Hazmat Shipper (ADG7)
 - UPS Management can Train: Recognize and Reject (HRR)



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01.01.01.06 General Loading/Unloading Guidelines

Regulated Carrier Functions

An employee who performs a dangerous goods function must receive initial training in the FAA-approved UPSCO training program before performing any of the regulated functions. Recurrent training is required at least every 24 months. The following information applies to all dangerous goods services described in this manual. In certain limited circumstances, personnel trained in another air carrier's FAA-approved program may be used to perform certain functions. In operations outside the U.S., outside personnel may be used for air/ground loading without being trained by UPSCO; however, such personnel must be supervised by UPSCO-trained personnel.

- Acceptance Auditors: Every dangerous goods package must be acceptance audited by a person trained in the FAA-approved UPSCO program before being loaded aboard an UPSCO aircraft.
- Air/Ground Loaders: Every person responsible for loading dangerous goods into an aircraft ULD or belly compartment, must have job-specific training in accordance with the FAA-approved UPSCO program.
- Unloaders: Employees whose sole function is to unload aircraft ULDs or belly compartments may do so with appropriate hazardous materials awareness training, which is standard for all UPS employees. Within the U.S., such training is documented in the UPS system in GEMS. In international locations, this training may be recorded in the form of record of attendance or certificates maintained in personnel files or at operating facilities.
- Air Freight/Air Cargo Acceptance Auditors: Every Air Freight/Air Cargo dangerous goods shipment must be acceptance audited by a person trained in the FAA-approved UPSCO program before being loaded aboard an UPSCO aircraft.
- Air Freight/Air Cargo Loaders: Every person responsible for loading Air Freight/Air Cargo dangerous goods into or on an aircraft ULD, must have job-specific training in accordance with the FAA-approved UPSCO program.

Regulated Processes

The FAA-approved training program requires the following process steps:

- Acceptance Auditing of Packages: Reference to a checklist is required in the UPS system. However, execution of a checklist for acceptable packages is required only under IATA procedures.
- Rejection of Packages That are Not Acceptable: No package is to be permitted aboard an UPSCO aircraft if it fails to meet regulatory standards and UPS requirements.



- Proper Orientation, Blocking and Bracing, and Separation from Incompatible Dangerous Goods: Loaders must ensure that dangerous goods packages bearing orientation arrows are always loaded in an upright position. Dangerous goods packages must be secured by blocking or bracing; use of other packages is acceptable to secure dangerous goods packages in a container or compartment. The UPS segregation table must be followed as instructed.
- Notification to Captain (NOTOC): The flight crew must be given written notification of the identity, quantity and location of dangerous goods loaded aboard the aircraft.
- Incident Reporting: As stated in Textset 01.01.01.07, certain incidents require immediate FAA notification, which is to be performed by the Air Dangerous Goods Compliance function. All incidents involving dangerous goods must be reported in writing, although certain package leaks may not require immediate (i.e., telephone) FAA notification.
- Discrepancy Reporting: FAA must be notified through the Air Dangerous Goods Compliance function whenever a discrepancy, as defined in the regulations, is detected in the UPS air system.
- Regulated Carrier Function (49 CFR Part 175) Discrepancy Handling: Gateway management are obligated to respond to any suspected violations of the carrier regulated functions described in 49 CFR Part 175. Such functions may include but are not limited to: package orientation, blocking and bracing, segregation, Notification of Pilot-in-Command (NOTOC), container and compartment quantity limitations, and placement of dangerous goods on the aircraft (e.g. accessibility, radioactive, etc.)

Gateway management must first correct the suspected violation to the extent such actions may be possible. Gateway management should then inform appropriate management at the offending location.

Finally, a report (verbal, fax or email) must be made to the Airline Dangerous Goods Compliance department described in this section. The ADG Compliance department will determine if any regulatory reporting is required and if additional corrective action is needed. See also textset 01.01.01.07.



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**01.01.01.07 Regulatory Reporting
49 CFR 171.15, 171.16, 175.31**

Incident Reporting

An incident, as defined by 49 CFR 171.15 and 49 CFR 171.16, is any unintentional release of a hazardous material in transportation or in storage incident to transportation. Any hazardous material incident within the air system must be reported to the UPS Air Dangerous Goods Compliance function.

Important: UPS is required to notify the National Response Center (NRC) at 800-424-8802 or 202-267-2675 as soon as practicable but no later than 12 hours after an occurrence if as a direct result of a hazardous material any of the following events occur:

- A person is killed
- A person receives an injury requiring admittance to a hospital
- The general public is evacuated for one hour or more
- A major transportation artery or facility is closed or shut down for one hour or more; or
- The operational flight pattern or routine of an aircraft is altered
- Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material
- Fire, breakage, spillage, or suspected contamination occurs involving an infectious substance other than regulated medical waste
- A release of a marine pollutant occurs in a quantity exceeding 450 L (119 gallons) for a liquid or 400 kg (882 pounds) for a solid; or
- A situation exists of such a nature (e.g., 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 NRC
- During transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat (which may cause charring of packaging, melting of packaging, scorching of packaging, or other evidence) occurs as a direct result of a battery or battery-powered device

This reporting is to be performed by the Air Dangerous Goods Compliance function. Any UPS operation experiencing one of these serious incidents involving an air service package must notify ADG Compliance immediately.

Other incidents must also be reported through the Air Dangerous Goods Compliance Function. However, immediate telephone notification may not be required, and written incident reports may suffice. Written reports for any unintentional release of a hazardous material are designated as DOT Form 5800.1.

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The DOT Form 5800.1 is to be prepared by the location discovering the incident and distributed as soon as possible to the Air Dangerous Goods Compliance function.

Parties Requiring Notification

The table below shows the correct parties who must be notified, depending on the type of incident. Notification will be performed by the Air Dangerous Goods Compliance function.

TYPE OF INCIDENT	PARTY TO BE NOTIFIED, AND METHOD
Undeclared dangerous goods or other discrepancy as defined under 49 CFR 175.31.	Nearest FAA Region Office, as soon as practicable, by DOT Form 5800.1 DOT/PHMSA by DOT Form 5800.1, within 30 days.
Any unintentional release of dangerous goods (including undeclared shipments).	Nearest FAA Region Office and DOT/PHMSA by DOT Form 5800.1, within 30 days.
A release to the environment of a hazardous substance in a quantity that meets or exceeds the Reportable Quantity (RQ).	The NRC by telephone (800-424-8802 or 202-267-2675) as soon as practicable, but no later than 12 hours after occurrence.
Damage to or leakage from a package containing an Infectious Substance (Division 6.2).	The NRC by telephone (800-424-8802 or 202-267-2675) as soon as practicable, but no later than 12 hours after occurrence.
During transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat (which may cause charring of packaging, melting of packaging, scorching of packaging, or other evidence) occurs as a direct result of a battery or battery-powered device.	The NRC by telephone (800-424-8802 or 202-267-2675) as soon as practicable, but no later than 12 hours after occurrence. Nearest FAA Region Office and DOT/PHMSA by DOT Form 5800.1, within 30 days.

Reporting of Dangerous Goods Occurrences

Dangerous goods occurrences are defined as any occasion in which the airline discovers that:

- Dangerous goods have been improperly loaded, segregated, separated;
- OR
- Dangerous goods have been carried without being included on the NOTOC.

Any UPS operation experiencing one of these serious events involving a UPS aircraft must notify ADG Compliance immediately. Reports of validated dangerous goods occurrences are to be performed by the ADG Compliance function.



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01.01.01.08 Emergency Response Communications

If notified of an emergency involving an active UPS flight, contact UPS Flight Dispatch (1-502-359-5100) for detailed information about the hazardous materials aboard the aircraft.

- Upon notification of a flight emergency, the flight dispatcher, or designee, must immediately collect all information about hazardous materials aboard the flight and provide it to the destination gateway, ARFF, and/or ATC by any effective means (such as email, RightFax, Telefax, or telephone).
- UPS Flight control personnel (UPS Flight Dispatch) have access to the type, quantity, and load position of any hazardous material on the flight utilizing the Hazardous Materials Management System (HMMS).

01.01.01.09 Dangerous Goods Process Measurement and Oversight

Procedures

The UPS Audit Process is the primary process measurement for most dangerous goods processes, procedures and controls. The audit process allows UPS's processes, procedures and controls to be measured by identifying any system deficiency. The identified deficiencies are risk assessed and a root cause analysis is performed. Once a root cause has been determined, a corrective action plan is developed. All elements in the corrective action plan are interfaced with other processes, procedures and controls to prevent a corrective action from adversely affecting other UPS processes. Finally, the corrected process, procedure or control will be measured to determine the effectiveness of the corrective action plan. Additionally, the audit checklists are evaluated for effectiveness in providing proper surveillance and measurement.

The UPS Audit process includes all forms and types of audits. There are two categories of audits in the UPS audit system, internal and external. Internal audits encompass those audits conducted by UPS departments. Examples of internal audits are UPS Airline Internal Evaluation Team audits, department self-audits and other department and function-specific audits. External audits are those conducted by agencies outside of UPS. Examples of external audits are IATA Operational Safety Audits (IOSA), Air Transport Oversight System (ATOS), and Department of Defense (DoD) audits.

Air Dangerous Goods Compliance, in coordination with the Airline Internal Evaluation Team, utilizes UPS-certified auditors to conduct comprehensive audits for UPS Airlines utilizing approved checklists. An auditor is considered to be certified once he completes the UPS Airline Audit Training Class. Auditors are not restricted to the checklist and may find areas where further investigation is needed. At a minimum, the related processes that are audited are as follows: Air Cargo Service, Air Recovery, Airport Sort, Deicing, Aircraft Fueling, Ground Feeder Operations, GSE setup (arrival and departure), Jet Aircraft Load and Unload, Lavatory, Training, Office Routine, Security, ULD, Dangerous Goods, Small Feeder Aircraft (arrival and departure), etc. The checklists utilized for the Airline Audit can be found on the Gateway Operations Support website.

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When deficiencies in dangerous goods operational process, procedures or controls are found during the audits, a root cause analysis is performed and corrective measures will be assigned to the affected departments by Air Dangerous Goods for operational compliance.

Relationship to Corporate Hazardous Materials Compliance Program

The Corporate Hazardous Materials Compliance Committee establishes procedures for handling hazardous materials or dangerous goods within UPS, Incorporated. All UPSCO dangerous goods programs must be consistent with the Corporate Hazardous Materials Compliance Program.

Personnel who believe activities are taking place in violation of the Corporate Hazardous Materials Compliance Program should follow the UPS "Open Door" policy to seek a resolution or make a report to the Corporate Compliance Department if they believe the issue cannot be resolved through the "Open Door" policy.

Each UPS employee is obligated to act to correct violations of the UPS Corporate Hazardous Materials Policy and/or the Hazardous Materials Regulations.

**01.01.01.10 Notification to Repair Stations
14 CFR 121.1005**

As required by 14 CFR 121.1005(e), UPSCO notifies repair stations of hazardous material policies in writing. This is done in the form of a letter which includes the text shown below:

- UPSCO is a 14 CFR Part 121 carrier with a "will-carry" status.
- UPSCO has an extensive Dangerous Goods program approved by the FAA
- UPSCO will only transport Dangerous Goods and non-regulated shipments or materials that have been scrutinized and loaded by personnel qualified under the appropriate function-specific training in the UPS Dangerous Goods Program.
- No person, including employees, vendors, contractors, or contract employees, working on behalf of a Repair Station may perform any transportation function on behalf of UPSCO other than preparing shipments for transportation under the conditions set forth in this notification. This restriction specifically includes 1. Acceptance; 2. Rejection; 3. Handling; 4. Storage incidental to transport; 5. Loading; and 6. Transportation of Hazardous Materials.
- Authorized Repair Station employees may package UPS Company Material (COMAT) only under the following conditions:
 - Anyone who prepares a UPS COMAT shipment, whether regulated or non-regulated, must have been trained as appropriate in the UPS Dangerous Goods program.
 - UPS and the repair station must both maintain records demonstrating the appropriate training is current for each employee preparing a UPS COMAT shipment.



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- All appropriate repair station employees must be notified of the following UPSCO hazardous material policy exceptions. This notification applies to both regulated and non-regulated materials but does not apply to items deemed “Ship’s Equipment.” UPSCO-owned materials being offered for transportation as common carriage shipments to UPS or any other commercial carrier are not subject to UPSCO policy restrictions.

Repairs stations acknowledge receipt of the notification by returning a signed copy of the notification letter. Notifications are filed in the Air Dangerous Goods Compliance Office (SDF).

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02.01.01.01 Definition of “Hazardous Materials” and “Dangerous Goods” 49 CFR 171.8, 172.101

The term "hazardous materials" maybe used interchangeably with the term "dangerous goods". The term "hazardous materials" originates in U.S. law, while the term "dangerous goods" originates from international documents on the same subject

The meaning of the term "hazardous materials" is given in 49 CFR 171.8:

Hazardous material means a substance or material, that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and designated as hazardous under Section 5103 of Federal hazardous material transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table 49 CFR 172.101, and materials that meet the defining criteria for hazard classes and divisions in 49 CFR Part 173 (**49 CFR 171.8**).

The meaning of the term "dangerous goods" is given in ICAO as:

Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in these instructions (ICAO Table 3-1), or which are classified according to these instructions (ICAO 1.3.1).

As can be seen, these definitions are virtually identical.

02.01.01.02 Hazard Classifications

Hazardous materials are grouped according to characteristics into hazard classes. Many classes have divisions for greater specificity. Following is a summary of the hazard classes.

- Class 1 Explosives
There are six divisions (1.1, 1.2, 1.3, 1.4, 1.5, and 1.6) and 13 compatibility groups (represented by the letters A, B, C, D, E, F, G, H, I, J, K, L, N and S).
- Class 2 Gases
 - Division 2.1 Flammable gas
 - Division 2.2 Non-flammable, non-toxic gas
 - Division 2.3 Toxic gas
- Class 3 Flammable liquid



- Class 4 Flammable solids, Self-reactive substances, and Materials dangerous when wet
 - Division 4.1 Flammable solids
 - Division 4.2 Spontaneously combustible
 - Division 4.3 Dangerous when wet
- Class 5 Oxidizers and Organic peroxides
 - Division 5.1 Oxidizers
 - Division 5.2 Organic peroxides
- Class 6 Toxic and Infectious substances
 - Division 6.1 Toxic materials
 - Division 6.2 Infectious substances
- Class 7 Radioactive materials
- Class 8 Corrosive materials
- Class 9 Miscellaneous dangerous goods
- ORM-D — Domestic U.S. classification, not valid internationally

A chart showing all the applicable labels is included below. All hazard labels are shown, whether they are routinely accepted by UPSCO or not.



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Hazardous Materials Warning Labels

Actual label size at least 100 mm (3.9 inches) on all sides

CLASS 1 Explosives Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6	CLASS 2 Gases Divisions 2.1, 2.2, 2.3	CLASS 3 Flammable Liquid	CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet Divisions 4.1, 4.2, 4.3	CLASS 5 Oxidizer, Organic Peroxide Divisions 5.1 and 5.2
<p>§172411</p>	<p>§172405(b), §172415, §172416, §172417</p>	<p>§172419</p>	<p>§172430, §172432, §172433</p>	<p>§172426, §172427</p>
<p>* Include compatibility group letter. ** Include division number and compatibility group letter.</p>				
CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substances Divisions 6.1 and 6.2	CLASS 7 Radioactive	CLASS 8 Corrosive	CLASS 9 Miscellaneous Hazardous Material	Cargo Aircraft Only
<p>§172320, §172405(a), §172409, §172430, §172432</p> <p><small>For Regulated Labeled Waste (RLW), an 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). CDC Biologic Agent label may be used as provided in 42 CFR 72.5 and 72.6. A bulk package of RLW must display a COMPLAINT marking.</small></p>	<p>§172436, §172438, §172440, §172441</p>	<p>§172442</p>	<p>§172446</p>	<p>§172448</p> <p>Empty Label</p> <p>§172452</p>

HAZARDOUS MATERIALS MARKINGS

Package Orientation (Red or Black) <p>§172.512(w)</p>	Keep Away from Heat <p>§172.517</p>	Fumigant Marking (Red or Black) <p>§173.29(a)(4)</p>	DANGER <p>§172.902(g) and §173.9</p>	INHALATION HAZARD <p>§172.513(e)</p>	HOT <p>§172.325</p>	Biological Substances, Category B <p>§172.532(w)</p>	UN3373 <p>§173.199 (a)(9)</p>
Limited Quantity* <p>§172.315</p>	ORM-D, Transition December 31, 2020 <p>§172.316</p>	Exempt Quantity <p>§173.4(a)(j)</p>	Marking of BCs <p>§178.703(h)(7)(i)</p>	Marine Pollutant <p>§172.322</p>			

* The new limited quantity marking designates hazardous material packages prepared for air transport (Y) and packages not prepared for air transport (all other modes). The ORM-D classification and the use of packages marked "Consumer commodity, ORM-D" is authorized until December 31, 2020, for domestic highway, rail, and vessel transportation. Transitional exception—Square-on-point with Identification Number: except for transportation by aircraft and until December 31, 2014, a package containing a limited quantity may be marked with identification number, preceded by the letters "UN" or "NA".

**02.01.01.03 Definitions****49 CFR 172.312, 175.33, 49 CFR Part 172 Subpart E**

The terms used in the regulation of dangerous goods are often distinct and specific. Following are definitions of terms that will be of assistance in administering this program.

Air Waybill

See also "UPS Waybill". This is the standard contract for carriage of air cargo. This form is typically designed to a standard format as outlined by the appropriate agreements of the International Air Transport Association (IATA) and/or the Air Transport Association of America (ATA) (Domestic UPS shipments do not include Air Waybills).

Captain's Envelope

See also "Dangerous Goods Envelope". A red-and-white envelope utilized in the UPSCO air dangerous goods service to identify and retain the NOTOC for an UPSCO flight.

Dangerous Goods

See definition in this section. This term is identical in meaning to the term "Hazardous Materials."

Dangerous Goods Envelope

A red-and-white envelope utilized in the UPSCO air dangerous goods service to identify and retain the NOTOC for an UPSCO flight.

Dangerous Goods Holding Area

Each UPS acceptance location (whether located in an air recovery, a local center, or a gateway) and all transfer and loading locations must have a location designated to hold dangerous goods packages when they are taken out of transportation pending customer pick-up, return to shipper, inspection or disposal.

Dangerous Goods Load Tag

The Dangerous Goods (DG) Load Tag denotes the presence of dangerous goods in an aircraft ULD .

Diamond Label

See also "Hazard Label". The hazard warning label designed in a square-on-point format for communicating hazards in packages offered for transportation. The size color and format of such labels are prescribed by the U.S. DOT (49 CFR Part 172 Subpart E), ICAO (Technical Instructions Part 4, Chapter 03) and IATA (Dangerous Goods Regulations Section 7.3). These hazard warning labels are distinct from Handling Labels.



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DOT Form 5800.1

The standard DOT form used for filing a written report of a hazardous materials/dangerous goods incident.

Emergency Response Guide (ERG)

An ICAO document, "Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods" (ICAO Doc 9481), or any other document containing similar appropriate information, that provides guidance to Flight Crews responding to accidents or incidents involving dangerous goods in air transport.

Flash Point

The lowest temperature, determined by standard methods, at which flammable vapor is given off by a liquid in sufficient concentration to be ignited in air when momentarily exposed to a source of ignition. It does NOT mean the temperature at which a liquid will ignite spontaneously.

Generic Proper Shipping Name

A general proper shipping name which is the closest appropriate description for certain materials in transportation. It is common (but not always mandatory) for the regulations to require that a supplemental technical name appear in parentheses following a generic proper shipping name.

Hazard Class

The defining criteria by which materials are classified as dangerous goods. A hazard class is typically defined by scientific testing criteria, although there are certain classes that are defined by other criteria. Some materials are occasionally assigned to a hazard class on the basis of human experience.

Hazard Label

See also "Diamond Label". The hazard warning label designed in a square-on-point format for communicating hazards in packages offered for transportation. The size color and format of such labels are prescribed by the U.S. DOT (49 CFR Part 172 Subpart E), ICAO (Technical Instructions Part 4, Chapter 03) and IATA (Dangerous Goods Regulations Section 7.3). These hazard warning labels are distinct from Handling Labels.

Hazardous Materials

See definition in this section. This term is identical in meaning to the term "Dangerous Goods."

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A company form used within UPS to notify the Air Dangerous Goods Compliance function at the Hazardous Materials Support Center of any deviation from procedures involving an air dangerous goods shipment (This same form may be used for notifying the Hazardous Materials Support Center about deviations from ground hazmat procedure).

Incident

Any unintentional release of a dangerous good from its package. Some incidents require immediate notification of the FAA and/or (outside the U.S.) the appropriate national authority.

Magnetized Materials

Materials regulated internationally (under ICAO and IATA procedures) as having a measurable magnetic field strength when packaged for transportation at a minimum of 0.002 gauss when measured at a distance of 7 feet. Such packages are regulated as dangerous goods under ICAO/IATA standards but not regulated by the U.S. DOT. Under both ICAO/IATA and U.S. DOT standards, no package may be loaded aboard an aircraft if it exhibits a magnetic field strength in excess of 0.00525 gauss when measured at a distance of 15 feet.

NOTOC

The abbreviation for the Notification to Captain, which is mandated under the requirements of the U.S. DOT (49 CFR 175.33), ICAO (TI Part 5, Chapter 04) and IATA regulations (DGR Section 9.5). UPSCO utilizes two methods for completing the NOTOC. One method is a NOTOC produced from the UPS Hazardous Materials Management System (HMMS). The other is a manual NOTOC consisting of a cover sheet and summary of all dangerous goods on board.

N.O.S.

An authorized abbreviation meaning "not otherwise specified". This term appears as part of many proper shipping names. It is common (but not always mandatory) for the regulations to require that a supplemental technical name appear in parentheses following a proper shipping name ending with the abbreviation "N.O.S.".

Orientation Arrows

The markings or Handling Labels used to indicate the correct upright direction of a package. Such arrows are typically mandatory for dangerous goods packages that contain liquids. See 49 CFR 172.312, ICAO Part 4, Chapter 03.02.10(b), and IATA 7.2.4.2.



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Packing Group

The Packing Group is representative of the degree of hazard posed by dangerous goods in many but not all hazard classes. Usually scientific testing criteria are used to define the packing groups in individual hazard classes. Packing Groups are established in all domestic U.S. hazard classes other than Classes 2, 7, some of Class 9 and ORM-D. Under international criteria, there are no Packing Groups in Class 1.

Radioactive Materials

Materials that give off ionizing radiation of sufficient strength to be defined as a material in Class 7.

SALT Package

A package bearing non-compliant hazardous material markings used by UPS to test hazardous material awareness (see SALT Program).

SALT Program

A UPS program that simulates a non-compliant hazmat package that is placed into a controlled portion of the network for purposes of recognition, handling and loading drills conducted by the area management or a designated employee.

Sublimation Rate

The rate at which carbon dioxide, solid (dry ice) converts from the solid phase to the gaseous phase (i.e., sublimates) without going through the liquid phase.

Segregation and Separation

The required enforcement of sufficient distance between packages of materials generally indicated by the regulations to have the potential to be incompatible if their contents come into contact with each other.

Transport Index

A dimensionless number indicative of the activity level of radioactive materials contained in one package. The transport index is determined by measurements of radiation levels on the surface and at a distance of one meter from any surface of the package. Only materials assigned to Radioactive Yellow-II and Yellow-III label categories exhibit a Transport Index.

Trigger Terms

Phrases or terms intended to assist personnel in recognizing the potential presence of dangerous goods that may not have been properly identified.

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Undeclared Dangerous Goods

Dangerous goods that are shipped without being identified through package marks and labels, or through the required dangerous goods documentation.

UPS Waybill

See also "Air Waybill". The UPS proprietary commercial documentation used for many (but not all) international shipments. This form does not adhere to IATA standards but rather is designed to satisfy UPS requirements.



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03.01.01.01 Scope

This section presents information about the aircraft in the UPSCO fleet, which will assist in the administration of the Air Dangerous Goods program.

Aircraft types in the UPSCO fleet are:

- B757-PF Freighter
- B767-300 Freighter

- A300-600 Freighter
- MD-11 Freighter
- B747-400 Freighter

03.01.01.02 Dry Ice Capacity **14 CFR 25.831, 49CFR 173.217**

Procedures for the carriage of dry ice aboard UPS aircraft have been established in compliance with the federal regulations regarding cabin air quality. The following loading limits are based on testing and analysis performed by UPS on dry ice carriage aboard UPS aircraft and based on research and information contained within the federal regulations.

Tables A, B, C and D represent the following assumptions:

- For domestic operations, aircraft with a solid bulkhead (B757, B767, B747-400, A300, MD-11) will not exceed carbon dioxide concentrations of 0.5% for occupied compartments and 3.0% for unoccupied cargo compartments.
- For international operations, all aircraft will not exceed a carbon dioxide concentration of 0.5% for all aircraft compartments.
- Based on testing performed by UPS, and as per FAA Advisory Circular (AC) 91-76, it has been determined that the typical package containing dry ice shipped aboard UPS aircraft will sublimate at a rate of 2% per hour.
- The dry ice limit for all unventilated, unoccupied cargo compartments is 200 kg (440 lb).
- UPS operating procedures for dry ice are located in the Flight Operations Manual (FOM) and Ground Operations Manual (GOM) for Flight Operations, Aircraft Maintenance, and Ground Handling personnel. An explicit warning will be added to the appropriate manuals to inform personnel of the hazards of dry ice and to disallow loitering in any cargo bay where dry ice is loaded.



- UPS gateway personnel may load aircraft to within the two or three air conditioning pack operating limits, as stated in Tables B and D, after determining that at least two packs are operational.
- No bare (uninsulated) dry ice is permitted in any ULD or on any aircraft pallet.
- Live animals should not be loaded with any quantity of dry ice in the same ULD or aircraft belly compartment.
- A line on the ADG Load Tag is available to indicate the total quantity of both regulated and non-regulated dry ice loaded in a ULD, onto a pallet, and/or into an aircraft belly compartment. Ramp personnel will complete a Dry Ice Alert Notification for all flights that are planned at equal to or greater than 1,400 pounds of dry ice on the Main Cargo Deck.

The following is a tabulation of the dry ice limits for UPS aircraft:

Table A — Domestic Dry Ice Limits with One Air Conditioning Pack Operating

Domestic Limitations being defined for this purpose as the contiguous 48 states, Puerto Rico and the following airports in Canada and Mexico: Hamilton, Ontario, Canada (CYHM/YHM); Montreal (Mirabel) Intl., Quebec, Canada (CYMX/YMX); Vancouver Intl., BC, Canada (CYVR/YVR); Calgary Intl., Alberta Canada (CYYC/YYC); Don Miguel Hidalgo Intl., Guadalajara, Mexico (MMGL/GDL); Lic Benito Juarez Intl., Mexico City, Mexico (MMM/MEX); Gen Mariano Escobedo, Monterrey, Mexico (MMMY/MTY); Montreal (Trudeau Intl), Quebec, Canada (CYUL); Toronto (Lester B. Pearson Intl), Canada (CYYZ/YYZ); Winnipeg (Richardson Intl), Manitoba, Canada (CYWG/YWG).

Aircraft	B757	B767	A300	MD-11	B747-400
Notes	2, 3, 4	1, 2, 3, 4, 5	1, 2, 3, 4, 7	2, 3, 4, 6, 8	N/A
Main LB	10,450	9,040	16,000	440	0
Deck KG	4,740	4,100	7,257	200	0
Fwd LB	440	440	440	440	0
Deck KG	200	200	200	200	0
Ctr LB	-	-	-	440	0
Deck KG	-	-	-	200	0
Aft LB	440	880	880	440	0
Deck KG	200	400	400	200	0
Acft LB	11,330	10,360	17,320	1,760	0
Total KG	5,140	4,700	7,857	800	0



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Table B — Domestic Dry Ice Limits with Two or Three Air Conditioning Packs Operating

Aircraft	B757	B767	A300	MD-11	B747-400
Notes	2, 3, 4	1, 2, 3, 4, 5	1, 2, 3, 4, 7	2, 3, 4, 6, 8	1, 2, 3, 4
Main LB	16,720	10,970	34,200	21,320	34,160
Deck KG	7,584	4,975	15,513	9,670	15,495
Fwd LB	440	440	440	440	440
Deck KG	200	200	200	200	200
Ctr LB	-	-	-	440	-
Deck KG	-	-	-	200	-
Aft LB	440	880	880	440	880
Deck KG	200	400	400	200	400
Acft LB	17,600	12,290	35,520	22,640	35,480
Total KG	7,984	5,575	16,113	10,270	16,095

Table C — International Dry Ice Limits with One Air Conditioning Pack Operating

Aircraft	B757	B767	A300	MD-11	B747-400
Notes	2, 3, 4	1, 2, 3, 4, 5	1, 2, 3, 4, 7	2, 3, 4, 6, 8	N/A
Main LB	1,630	1,400	2,490	440	0
Deck KG	740	635	1,130	200	0
Fwd LB	440	440	440	440	0
Deck KG	200	200	200	200	0
Ctr LB	-	-	-	440	0
Deck KG	-	-	-	200	0
Aft LB	440	880	880	440	0
Deck KG	200	400	400	200	0
Acft LB	2,510	2,720	3,810	1,760	0
Total KG	1,140	1,235	1,730	800	0



Table D — International Dry Ice Limits with Two or Three Air Conditioning Packs Operating

Aircraft	B757	B767	A300	MD-11	B747-400
Notes	2, 3, 4	1, 2, 3, 4, 5	1, 2, 3, 4, 7	2, 3, 4, 6, 8	1, 2, 3, 4
Main LB	2,600	1,700	5,320	3,320	5,310
Deck KG	1,180	771	2,413	1,506	2,409
Fwd LB	440	440	440	440	440
Deck KG	200	200	200	200	200
Ctr LB	-	-	-	440	-
Deck KG	-	-	-	200	-
Aft LB	440	880	880	440	880
Deck KG	200	400	400	200	400
Acft LB	3,480	3,020	6,640	4,640	6,630
Total KG	1,580	1,371	3,013	2,106	3,009

Notes

- On the A300, B747 and B767, no more than 440 pounds (220 kg) of dry ice may be loaded in the lower Fwd Belly compartment. In addition, no more than a combined total of 880 pounds (400 kg) may be loaded in the lower Aft Belly and Bulk/Misc. compartments.
- For dry ice loads equal to or greater than 1,400 pounds on the Main Cargo Deck, at least one air conditioning pack must be operating during the loading and unloading of dry ice cargo on the Main Cargo Deck.
- Live animals should not be transported on the Main Cargo Deck with dry ice loads equal to or greater than 1,400 pounds. Live animals should not be transported in the lower cargo compartments with any quantity of dry ice loaded in the same compartment.
- Prior to entering enclosed areas of the aircraft with dry ice loads equal to or greater than 1,400 pounds on the Main Cargo Deck, open the exterior access door(s) to the work area and initiate the operation of at least one air conditioning pack, if not already operating, prior to entry.
- On the B767, for dry ice loads equal to or greater than 1,400 pounds on the Main Cargo Deck, the EQUIP COOLING switch on the Equipment Cooling Control Panel must be positioned to STBY with engines off.
- On the MD-11, for any quantity of dry ice loaded on the Main or Lower Cargo Decks, it is recommended to set the FWD and AFT CARGO TEMP controls to ON, if available.
- On the A300, for dry ice loads equal to or greater than 1,400 pounds on the Main Cargo Deck, set pack setting to NORM mode.
- On the MD-11, for dry ice loads equal to or greater than 13,430 pounds on the Main Cargo Deck, set the pack ECON mode to OFF.



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03.01.01.03 Radioactive Materials Aircraft Limits and Separation Distance Requirement

Radioactive II-Yellow and III-Yellow shipments have specific aircraft loading restrictions. See the applicable Dangerous Goods Loading Positions chart in the Load Planning Manual (LPM) for acceptable loading positions for Radioactive II-Yellow and III-Yellow. In addition, the following minimum load restrictions must be adhered to on all UPSCO aircraft:

- Maintain thirty (30) feet separation between Radioactive II-Yellow and III-Yellow shipments and crew.
- The maximum allowable TI for a container is 50.
- The combined total TI for all Radioactive II-Yellow and III-Yellow loaded onboard the aircraft cannot exceed 200, unless U.S. DOT-SP 7060 is applicable.

Radioactive I-White are not subject to the loading restrictions shown above and are considered "Unrestricted" for aircraft loading purposes.

03.01.01.04 Magnetized Material

Magnetized materials may be regulated, depending on the measurable magnetic field strength exerted by the article, using units of amperes per meter (A/m) or gauss. The regulations concerning Magnetized materials vary considerably between domestic U.S. (49 CFR) and international (ICAO/IATA).

In any case, the maximum permissible magnetic field strength for any package loaded on an aircraft is 0.418 A/m or 0.00525 gauss when measured at a distance of 15 feet from any surface of the package.

Domestic U.S. Regulations

The U.S. DOT has deregulated magnetized material that has a field strength of not more than 0.418 A/m or 0.00525 gauss, when measured at a distance of no more than 15 feet from any surface of a package.

International (IATA / ICAO) Regulations

International regulations apply to any article that exhibits a field strength of at least 0.159 A/m or 0.002 gauss when measured at a distance of 7 feet from any surface of the package. At this point the articles require marking and labeling, and must be accompanied by the International Shipper's Declaration for Dangerous Goods. Acceptability of such articles in the UPS international system depends on the service selected.



Magnetized materials may not be loaded into positions that can affect aircraft avionics systems. No known magnetized material shipment can be loaded in position 1 of any UPSCO aircraft or in the last position on the main deck of any aircraft. Additional aircraft loading restrictions may exist. See the LPM for the applicable aircraft Dangerous Goods Loading Positions chart.

03.01.01.05 Oxygen Cylinders 49 CFR 175.501

In accordance with 49 CFR 175.501(b) the aggregate number of oxygen cylinders that may be loaded into an inaccessible aircraft compartment without smoke detection and fire suppression installed is limited to six cylinders. To ensure compliance on all aircraft models, UPSCO restricts loading of oxygen cylinders in belly compartments to COMAT shipments only. The total number of COMAT oxygen cylinders allowed in any one belly compartment is limited to six cylinders with an aggregate net quantity of no more than 75 kgs. With the specific exception of COMAT oxygen cylinders, UPSCO requires all packages bearing a Division 5.1 Oxidizer label (either primary or sub-risk) to be loaded in an accessible position on the aircraft.

03.01.01.06 Cargo Aircraft Only and Crew Accessible Materials 49 CFR 175.75

Unless exempted from in-flight accessibility, UPS will load "Cargo Aircraft Only" (CAO) and other shipments of dangerous goods that require crew accessibility in a Class C compartment or a position identified as accessible by the Dangerous Goods Loading Position chart for that aircraft. Such shipments, when loaded in an accessible position, will be configured so as to allow the crew members and/or other authorized persons to access, and when appropriate, handle such packages during flight.

Based on the volume of CAO shipments offered, additional aircraft positions on the main deck may be made accessible to crew members by creating an adequate walkway between subsequent positions. See the Dangerous Goods Loading Position Charts in the LPM for acceptable CAO loading positions by aircraft type.

The following hazardous materials classes and/or divisions do not require accessibility when shipped in CAO quantities:

- Class 3, Packing Group III (that does not meet the definition of another hazard class, except CORROSIVE).
- Division 6.1 (except those also labeled as FLAMMABLE LIQUID)
- Division 6.2
- Class 7
- Class 9
- Limited Quantity or Excepted Quantity material



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03.01.01.07 Dangerous Goods Loading Restrictions

NOTE: See the LPM for dangerous goods aircraft loading restrictions.

**03.01.01.08 Notification to Captain (NOTOC)
49 CFR 175.33**

NOTOCS are mandated under the requirements of the U.S. DOT (49 CFR 175.33), ICAO (Technical Instructions Part 5, Chapter 04) and IATA regulations (DGR Section 9.5). UPSCO utilizes two different methods for completing the NOTOC. One method is the NOTOC produced from the UPS Hazardous Materials Management System (HMMS). The other is a manual NOTOC consisting of a cover sheet and summary of all dangerous goods on board.

The NOTOC methods described in this section are used to notify the pilot-in-command of the identity, location, and quantity of dangerous goods aboard an aircraft.

The NOTOC is available to the airports of last departure and next scheduled arrival until the flight has arrived at the destination airport via HMMS.

The completed NOTOC, signed by the ramp supervisor or designated employee, is presented to the pilot-in-command. The ramp supervisor (or designee) signs the applicable NOTOC form to confirm that there is no evidence that damaged or leaking dangerous goods packages have been loaded aboard the aircraft.

As soon as possible, the NOTOC must be completed and provided to the flight crew.

If the pilot-in-command is not aboard the aircraft (e.g., the pilot is completing pre-flight duties), another flight crew member may receive the NOTOC. However, a copy signed by the pilot-in-command must be received by ramp personnel prior to departure.

If no flight crew member is present (e.g., the aircraft is being pre-loaded some hours in advance of the scheduled departure), the NOTOC is to be placed into the dangerous goods document holder in or near the cockpit and identified as such. However, a copy signed by the pilot-in-command must be received by ramp personnel prior to departure.

All NOTOC methods require a pilot-in-command signature. Signed NOTOCs are maintained at the departure gateway for a period of 3 months plus the current working month. The Gateway Manager is responsible for the record retention of the signed NOTOC.

When required, electronic systems must be updated to match NOTOC documents prior to retention filing.



Unloading Procedures

Upon arrival of an aircraft at an intermediate airport at which cargo is on or off loaded, or at final destination, the ramp personnel must retrieve all pages of the NOTOC.

At an intermediate stop for an aircraft, where cargo is on or off loaded, all pages of the NOTOC are removed from the aircraft and either filed (if required by local legislation) or discarded.

Once the load plan for the outbound flight is completed, a new NOTOC must be produced and reviewed for accuracy, signed by the ramp supervisor, and presented to the Pilot-in-command for signature. One signed copy must be retained by the aircraft operation.

At a final destination, all pages of the NOTOC are removed and either filed (if required by local legislation) or destroyed.

03.01.01.09 Emergency Response Guidance

All flights for consignments that require a dangerous goods transport document must have the appropriate emergency response information immediately available to the Pilot-in-Command for use in emergency response to accidents or incidents involving dangerous goods.

Normal UPS Operations

1. Determine the hazard associated with a specific dangerous goods shipment on the aircraft by finding the associated Drill Code in the first column of the NOTOC for the item. This will be a two to four digit code with one number from one to eleven along with a one or two letter suffix.
2. Refer to the Aircraft Emergency Response Drills table on the back of the Air Dangerous Goods Envelope. Look up the number first to determine the risk and then look up the letter for any additional risk associated with the hazmat.

Charter Operations

1. Determine the hazard associated with a specific dangerous goods shipment on the aircraft by finding the associated Drill Code in the Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (ICAO Doc 9481), Chart 4-3, "Numerical List of Dangerous Goods." This will be a two to four digit code with one number from one to eleven along with a one or two letter suffix.
2. Refer to the Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (ICAO Doc 9481), Table 4-1, "Aircraft Emergency Response Drills." Look up the number first to determine the risk and then look up the letter for any additional risk associated with the hazmat.



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**03.01.01.10 Hazardous Materials Exceptions (For Crewmembers and Jumpseaters) (49 CFR 175.10)
49 CFR 175.10**

In general, U.S. Department of Transportation (DOT) regulations prohibit crewmembers (includes jumpseaters) from carrying hazardous materials aboard commercial aircraft. The Table below provides the exceptions for crewmembers to carry a limited amount of personal-use hazardous materials on their person or in their luggage as allowed by 49 CFR 175.10, and in addition, are also allowed by UPS policy. If an exception is not specifically listed in the table, but is provided by 49 CFR 175.10, it has been omitted purposely by company policy.

Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Medicinal and toilet articles (including flammable and nonflammable aerosols)	Toilet or medicinal articles that are hazardous materials such as rubbing alcohol, flammable perfume and colognes, nail polish and remover, and aerosols (hairspray, shaving cream, etc.).	Hazardous materials that not medicinal / toilet articles or described in the other exceptions, such as: spray paints, aerosol laundry starch, insecticides, drain cleaners, camping fuel, etc.	(1)(i) Non-radioactive medicinal and toilet articles for personal use (including aerosols) 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.

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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Additional nonflammable aerosols that not medicinal or toilet articles (nonflammable aerosols are rare.)	Non-toiletry aerosols that contain nonflammable & non-toxic gas checked baggage only.	Aerosols without caps or other protective features around the release device / button are also not allowed.	(ii) Other aerosols in Div. 2.2 (nonflammable gas) with no subsidiary risk carried in checked baggage only. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release; and (iii) The aggregate quantity of these hazardous materials carried by each person may not exceed 2 kg (70 ounces) by mass or 2 L (68 fluid ounces) by volume and the capacity of each container may not exceed 0.5 kg (18 ounces) by mass or 500 ml (17 fluid ounces) by volume.
Safety matches	Safety matches (book matches) may be carried on one's person in the cabin of the aircraft.	Strike anywhere matches, lighter refills, lighter fuel, and lighters containing unabsorbed fuel (other than liquefied gas).	(2) One packet of safety matches or a lighter intended for use by the 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.
Radioactive and battery-powered devices in the body	Pacemakers or similar battery-powered devices and radiopharmaceuticals contained in the body.		(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.
Duty free perfume and cologne	Flammable perfumes and colognes from the airport / airline duty free shops.		(5) Perfumes and colognes purchased through duty-free sales and carried on ones person or in carry-on baggage.



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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Curling iron (cordless)	A curling iron with a flammable gas cartridge installed.	Extra flammable gas cartridges.	(6) Hair curlers (curling irons) containing a hydrocarbon gas such as butane, no more than one per person, in carry-on or checked baggage. The safety cover must be securely fitted over the heating element. Gas refills for such curlers are not permitted in carry-on or checked baggage.
Small mercury thermometer	Small personal mercury thermometer in a protective case		(7) A small medical or clinical mercury thermometer for personal use, when carried in a protective case in carry-on or checked baggage.

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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Dry Ice	Small amounts of dry ice in carry-on (2.5 kg) or checked baggage (2.5 kg) in a package that allows venting of carbon dioxide gas.	Dry ice in air-tight packages.	(10) Dry ice (carbon dioxide, solid): (i) Quantities may not exceed 2.5 kg (5.5 pounds) per person or when used to pack perishables not subject to the HMR. The packaging must permit the release of carbon dioxide gas. (ii) When carried in checked baggage, each package is marked "DRY ICE" or "CARBON DIOXIDE, SOLID" and marked with the net weight of dry ice or an indication the net weight is 2.5 kg (5.5 pounds) or less.
Mercury barometer or thermometer	Larger mercury thermometers and barometers carried by government weather personnel in carry-on baggage only. Must be in a leak-proof, mercury proof packaging.		(13) A mercury barometer or thermometer carried as carry-on baggage, by a representative of a government weather bureau or similar official agency provided that the individual advises the operator of the presence of the barometer or thermometer in his baggage. The barometer or thermometer must be packaged in strong packaging having 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.



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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Heat-producing equipment	Diving lamps and other battery-operated extreme heat producing equipment in carry-on baggage only. Power must be disconnected.		(14) Electrically powered heat producing articles (e.g., battery operated equipment such as diving lamps and soldering equipment) as carry-on baggage only and with approval of the operator of the aircraft. The heat producing component, the energy source or other component (e.g. fuse), must be removed to prevent unintentional functioning during transport. Any battery that is removed must be protected against short circuit by placement in original retail packaging or by otherwise insulating terminals (e.g. by taping over exposed terminals or by placing each battery in a separate plastic bag or protective pouch).

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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
Lithium and lithium-ion batteries for consumer electronics	Small lithium and lithium-ion batteries in consumer electronic devices. Spare batteries must be protected from damage and short circuit.	Loose batteries not protected from short circuit.	(18) Except as provided in 49 CFR 173.21 portable electronic devices (watches, calculating devices, cameras, cellular phones, lap-top and notebook computers, camcorders, etc.) containing cells or batteries (including lithium cells or batteries), and spare batteries and cells for these devices, when carried by passengers or crew members for personal use. Each spare battery 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) and carried in carry-on baggage only. In addition, each installed or spare battery must comply with the following; (i) For a lithium metal battery, a lithium content of not more than 2 grams per battery; or (ii) For a lithium-ion battery, an aggregate equivalent lithium content of not more than 8 grams per battery, except that up to two batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried.



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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
			(iii) For a non-spillable battery, the battery and equipment must conform to 49 CFR 173.159 (d). Each battery must not exceed a voltage greater than 12 volts and a watt-hour rating of not more than 100Wh. No more than two individually protected spare batteries may be carried. Such equipment and spare batteries must be carried in checked or carry-on baggage.

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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
<p>Fuel cells and fuel cell cartridges</p>	<p>A fuel cell, and not more than two spare fuel cell cartridges; when for personal use and in carry-on baggage only.</p>	<p>Refuelling of a fuel cell aboard an aircraft.</p>	<p>(19) Fuel cells used to power portable electronic devices (e.g. cameras, cellular phones, laptop computers and camcorders) and spare fuel cell cartridges when transported for personal use under the following conditions: (i) Fuel cells and fuel cell cartridges may contain only Division 2.1 liquefied flammable gas, or hydrogen in a metal hydride, Class 3 flammable liquid (including methanol), Division 4.3 water-reactive material, or Class 8 corrosive material; (ii) The quantity of fuel in any fuel cell or fuel cell cartridge may not exceed: (A) 200 ml (6.76 ounces) for liquids; (B) 120 ml (4 fluid ounces) for liquefied gases in non-metallic fuel cell cartridges, or 200 ml (6.76 ounces) for liquefied gases in metal fuel cell cartridges; (C) 200 g (7 ounces) for solids; or (D) For hydrogen in metal hydride, the fuel cell cartridges must have a water capacity of 120 ml (4 fluid ounces) or less; (iii) No more than two spare fuel cell cartridges may be carried by a passenger or crew member as follows: (A) Fuel cell cartridges containing Class 3 flammable liquid (including methanol) and Class 8 corrosive material in carry-on or checked baggage; and (B) Division 2.1 liquefied flammable gas or hydrogen in a metal hydride and Division 4.3 water-reactive material in carry-on baggage only;</p>



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Crewmember Hazmat Exception	What is Allowed	What is not Allowed	Regulatory Reference 49 CFR 175.10(a)...
			(iv) Fuel cells containing fuel are permitted in carry-on baggage only; (v) Fuel cell cartridges containing hydrogen in a metal hydride must meet the requirements in 173.230(d) of this subchapter; (vi) Refuelling of a fuel cell aboard an aircraft is not permitted except that the installation of a spare cartridge is allowed; (vii) Each fuel cell and fuel cell cartridge must conform to IEC 62282-6-100 and Amend 1 (IBR; see 171.7 of this subchapter) and must be marked with a manufacturer's certification that it conforms to the specification. In addition, each fuel cell cartridge must be marked with the maximum quantity and type of fuel in the cartridge; (viii) Interaction between fuel cells and integrated batteries in a device must conform to IEC/PAS 62282-6-100 and Amend 1 (IBR, see 171.7 of this subchapter). Fuel cells whose sole function is to charge a battery in the device are not permitted.

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04.01.01 Overview

04.01.01.01 General

UPS offers a variety of transportation services to individual and commercial shippers. UPSCO transports air dangerous goods shipments that originate from shippers who select one of the services offered. Not all dangerous goods classes transported by UPSCO are accepted in all service offerings. This section defines the dangerous goods acceptability by service offering.

04.01.02 U.S. Small Package Service

04.01.02.01 General

The U.S. domestic small package Air Dangerous Goods (ADG) service is offered to contract customers wishing to send dangerous goods to and from points within specified U.S. territories. Details of the contract requirements for ADG service are governed by the UPS Hazardous Materials Compliance Manual.

ADG shipments must be offered and accepted in accordance with 49 CFR or ICAO/IATA requirements and additional UPS restrictions. With exception of certain Class 9 materials, specifically identified in the UPS chemical tables, all ADG shipments must be prepared as for carriage aboard passenger aircraft. UPS restrictions are defined in detail in the UPS Guide for Ground and Air Hazardous Materials, which is maintained for external and internal purposes on the UPS internet web site at the following address: www.ups.com.

Service offerings in which Air Dangerous Goods Service are available are:

- UPS Next Day Air
- UPS Second Day Air
- UPS 3 Day Select

Territories served are shown in the table below.

Location	Origin	Destination
Continental U.S.	All points.	All points.
Puerto Rico	All points.	All points.
Alaska	Selected. See UPS Guide for Shipping Hazardous Materials on Web Site.	All points.
Hawaii	Selected. See UPS Guide for Shipping Hazardous Materials on Web Site.	Selected. See UPS Guide for Shipping Hazardous Materials on Web Site.
Other U.S. territories (Guam, U.S. Virgin Islands)	No	No

**04.01.02.02 Hazard Classes Prohibited or Restricted in ADG Service**

UPS applies the following restrictions to the domestic ADG service. Unless a hazard class or division is mentioned below, no additional restrictions apply.

Class 1

No explosives other than 1.4S are permitted.

Class 2

No materials in Division 2.3 (Toxic Gas) are permitted.

Class 4

No materials in Division 4.2 (Spontaneously Combustible) are permitted. Materials in Division 4.3 (Dangerous When Wet) must be in an applicable exemption package, providing relief from placarding requirements for motor vehicles. Display of "Dangerous When Wet" labels is acceptable.

Class 5

Division 5.1 (Oxidizers) are not accepted from customers as either a primary or subsidiary risk.

Division 5.2 (Organic Peroxides) are not permitted as either a primary or subsidiary risk.

NOTE: COMAT shipments of "Oxygen, compressed" are allowed within the air system, as limited by applicable DOT regulations.

Class 6

Division 6.1 (Toxic Materials) of all Packing Groups must be in a valid DOT exemption package that allows the omission of the TOXIC or KEEP AWAY FROM FOOD label, as appropriate.

Class 7

Radioactive White-I packages are acceptable, provided they are being shipped for medical, research or diagnostic purposes.

Radioactive Yellow-II or Yellow-III packages are not permitted.

Other than those specified Class 9 shipments in the UPS Chemical Table, no small package ADG shipment will be accepted with the "CARGO AIRCRAFT ONLY" label unless pre-approval is received from the Louisville Air Dangerous Goods Office.



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04.01.03 International Small Package Service

04.01.03.01 General

The international small package Air Dangerous Goods (ADG) service is offered in locations approved by the Corporate organization to contract customers. Details of the contract requirements for ADG service are governed by the UPS Hazardous Materials Compliance Committee.

International ADG shipments must be offered and accepted in accordance with IATA requirements and additional UPS restrictions. With exception of certain Class 9 materials, specifically identified in the UPS chemical tables, all international ADG shipments must be prepared as for carriage aboard passenger aircraft. UPSCO restrictions are defined in general in the UPSCO carrier variations (two-letter designator 5X) in the IATA Dangerous Goods Regulations.

Service offerings in which international Air Dangerous Goods Service are available are dictated by Corporate approval.

04.01.03.02 Hazard Classes Prohibited or Restricted in International ADG Service

UPS applies the following restrictions to the international ADG service. Unless a hazard class or division is mentioned below, no additional restrictions apply.

Class 1

No explosives are permitted.

Class 2

No materials in Division 2.3 (Toxic Gas) are permitted.

Class 4

No materials in Division 4.2 (Spontaneously Combustible) are permitted.

No materials in Division 4.3 (Dangerous When Wet) are permitted.

Class 5

Division 5.1 (Oxidizers) are not accepted from customers as either a primary or subsidiary risk.

Division 5.2 (Organic Peroxides) are not accepted from customers as either a primary or subsidiary risk.

NOTE: COMAT shipments of "Oxygen, compressed" are allowed within the air system, as limited by applicable DOT regulations.

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Class 6

Division 6.1 (Toxic materials) are not permitted.

Division 6.2 Infectious Substances in Category A are not accepted. UN3373 Biological Substances, Category B, are accepted.

Class 7

No Radioactive White-I, Yellow-II or Yellow-III packages are permitted.

Other than those specified Class 9 shipments in the UPS Chemical Table, no small package ADG shipment will be accepted with the CARGO AIRCRAFT ONLY Label unless pre-approval is received from the Louisville Air Dangerous Goods Office.

04.01.04 Air Freight Service

04.01.04.01 General

UPS Air Freight Service offers to transport dangerous goods under tightly controlled circumstances.

Except as noted below, UPS Air Freight Service dangerous goods shipments must be offered and accepted in accordance with IATA requirements and additional UPS restrictions. UPSCO restrictions are defined in general in the UPS carrier variations (two-letter designator 5X) in the IATA Dangerous Goods Regulations.

Packages prepared under 49 CFR as Consumer Commodity, ORM-D will be transported within U.S. domestic territory.

04.01.04.02 Hazard Classes Permitted in Air Freight Service

UPS applies the following restrictions to the carriage of dangerous goods in Air Freight Service. The table below indicates the hazard classes which are accepted in the Air Freight Service and those that are not. Air Freight will accept dangerous goods in either Passenger or Cargo Aircraft Only quantities.



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Accepted	Not Accepted
Class 1, Division 1.4, (Explosives) including several new compatibility groups	Class 1, Divisions 1.1, 1.2, 1.4F, 1.3, 1.5, 1.6
Class 2, Divisions 2.1 (Flammable Gas) and 2.2 (Non-flammable Gas)	Class 2, Division 2.3 (Toxic Gas)
Class 3 (Flammable Liquids)	
Class 4, Divisions 4.1 (Flammable Solid), 4.2 (Spontaneously Combustible), 4.3 (Dangerous When Wet)	
Class 5, Divisions 5.1 (Oxidizer) and 5.2 (Organic Peroxide)	
Class 6, Division 6.1, PG I, II, and III (Toxic Liquids and Solids other than Toxic Inhalation Hazard)	Class 6, Division 6.1 (prohibiting any material with a high Toxic Inhalation Hazard)
Class 6, Division 6.2, Category B (Biological Substances)	Class 6, Division 6.2, Category A (Infectious Substances)
Class 7 – I-White, II-Yellow, III-Yellow, non-fissile Radioactive Materials (including Excepted Packages) for Domestic U.S., Mexico and Canada transportation only	Class 7 Fissile Class 7 (including Excepted Packages) on UPSCO flights outside of U.S., Canada, and Mexico. Will not be offered outside North America
Class 8 (Corrosive)	
Class 9 (Miscellaneous)	
ORM-D Materials prepared and marked ORM-D-Air (For domestic U.S. transportation only)	ORM-D Materials prepared and marked ORM-D-Air (Not permitted for international transportation)
	Hazardous Waste
	Salvage Containers

On a case-by-case basis, deviations from these offerings may be authorized by approval of the UPS Air Freight Services function (Air Group) and UPS Air Dangerous Goods Compliance function (SDF).

04.01.05 Air Cargo Service

04.01.05.01 General

UPS Air Cargo Service offers to transport dangerous goods under tightly controlled circumstances.

Except as noted below, UPS Air Cargo Service dangerous goods shipments must be offered and accepted in accordance with IATA requirements and additional UPS restrictions. UPSCO restrictions are defined in general in the UPS carrier variations (two-letter designator 5X) in the IATA Dangerous Goods Regulations.

When appropriate for logistical reasons, UPS Air Cargo Services may be engaged to transport UPSCO COMAT Hazmat shipments. Such shipments may be offered in accordance with either 49 CFR requirements, or in accordance with IATA requirements, depending on the routing and other logistical considerations.

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Origins and destinations for dangerous goods in UPS Air Cargo Service are approved by the UPS Air Dangerous Goods Compliance function in coordination with the UPS Air Cargo Service function in the Air Group.

For approval, consideration is given to the extent of training in the proposed airports of origin and destination, the degree of risk posed by the proposed materials, and such other factors deemed appropriate by the personnel involved.

04.01.05.02 Hazard Classes Permitted in Air Cargo Service

The following table specifies the restrictions UPS applies to the carriage of dangerous goods in Air Cargo Service.

Class/Division	Accepted	Not Accepted
Class 1		All Classes and Divisions
Class 2	Division 2.2, non-flammable gas	No Division 2.1 (Flammable Gas) No Division 2.3 (Toxic Gas)
Class 3	Flammable liquid, Packing Group III, without a subrisk	No Flammable liquid, Packing Groups I No Flammable liquid, Packing Group II
Class 4		No Division 4.1 (Flammable Solid) No Division 4.2 (Spontaneously Combustible) No Division 4.3 (Dangerous When Wet)
Class 5		No Division 5.1 (Oxidizers) No Division 5.2 (Organic Peroxides)
Class 6	Division 6.2 Category B (Biological Substances)	No Division 6.1 (Toxic) No Division 6.2 Category A (Infectious Substances)
Class 7		No Radioactive I- White No Radioactive II- Yellow No Radioactive III- Yellow (Including Excepted Packages)
Class 8	Corrosive, Packing Group III, without a subrisk	No Corrosive Packing Group I No Corrosive Packing Group II
Class 9	Permitted	

NOTE: Shipments of Oxygen, compressed are permitted in COMAT

On a case-by-case basis deviations from these offerings may be authorized by approval of UPS Air Cargo Services function (Air Group) and UPS Air Dangerous Goods Compliance function (SDF).

Air Cargo dangerous goods shipments will be accepted with the CARGO AIRCRAFT ONLY label only when approved by the Air Dangerous Goods Compliance function.



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04.01.06 Aircraft Charters

04.01.06.01 General

UPS aircraft operated in charter service may be authorized to transport dangerous goods only under the conditions specified in this section.

Due to the dedicated nature of charter service, the UPS Air Dangerous Goods Compliance function may authorize deviation from published restrictions in the UPS carrier variations (two-letter designator 5X) contained within the IATA Dangerous Goods Regulations.

Dangerous goods will be transported on U.S. Department of Defense (DoD) charters in accordance with title 49CFR, ICAO Technical Instructions, Air Force Manual (U.S.) (AFMAN) 24-204, or as otherwise authorized by DOT Special Permit.

Authorization to carry dangerous goods aboard UPSCO aircraft chartered to other parties (non-DoD) must be obtained from the UPS Air Dangerous Goods Compliance function. The following factors are considered in this determination:

- Type and Quantity — For non-military charters, the nature and relative hazard of the dangerous goods proposed for the flight will be key factors in granting permission to carry the dangerous goods.
- Available Support — When flights operate between airport locations where UPS does not normally have suitable operational support (including the required type of dangerous goods training), a UPS-designated person trained in the IATA Dangerous Goods Regulations under the FAA-approved UPSCO training program must be present to acceptance audit the cargo, direct the dangerous goods compliance of loading and unloading operations, and ensure proper issuance of the NOTOC.

**04.01.06.02 Emergency Response Information
49 CFR 172.600, 172.602**

All flights for consignments that require a dangerous goods transport document must have the appropriate emergency response information immediately available to the Pilot-in-Command for use in emergency response to accidents or incidents involving dangerous goods.

- Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (ICAO Doc 9481),
OR
- Any other document that contains similar appropriate information (UPS NOTOC Envelope, Flight Operations Manual, PDF from Flight Control)

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05.01.01 UPS Aircraft Operations — 49 CFR Part 175

**05.01.01.01 Acceptance Auditing
49 CFR 175.30**

Every air dangerous goods shipment, requiring shipping papers, must be acceptance audited by a person trained in the appropriate Acceptance Auditor training within the past 24 months under the FAA-approved UPSCO training program.

- For U.S. domestic shipments offered under 49 CFR, the Acceptance Auditor must reference the “Hazardous Materials Rejection Checklist.” The checklist must be completed for any package that is not accepted.
- For all other dangerous goods shipments, an acceptance checklist must be completed.

No aircraft unit load device (ULD) loaded by a shipper, including those not containing dangerous goods, may be accepted unless each of the following conditions are met:

- Approval has been received from the Air Dangerous Goods Compliance function (SDF).
- The shipper has received the required UPSCO dangerous goods training.
- Commodity types loaded by the shipper are limited to:
 - Non-dangerous goods
 - Magnetized materials: When the shipper is on contract with UPS and has properly notified UPS that the shipment contains magnetized material (by placard or other acceptable means)
 - Dry ice: When the shipper is on contract with UPS and has properly notified UPS that the shipment contains dry ice, including the total weight of dry ice tendered (by placard or other acceptable means)

**05.01.01.02 Reference Materials
49 CFR 172.602, 175.26, 175.3, 175.78**

The UPS Air Operations Segregation Table is required where packages are loaded for air transport or stored / held.

Materials required on-hand at all Gateways and Acceptance locations:

- Current copy of title 49 CFR (U.S. only)
- Current copy of IATA DGR
- Current copy of the ERG - Emergency Response Guide (U.S. only)
- Current copy of UPS Chemical Table

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Posters required on-hand where air packages are accepted or loaded for air transport:

- Prohibited Hazardous Materials
- Forbidden & Accepted Dangerous Goods in IDG Countries
- Forbidden Dangerous Goods in Non-IDG Countries

The Don't Gamble with Dangerous Goods poster is required in U.S. facilities where "persons" (non-UPS personnel) offer packages/cargo for air transportation (not applicable to Customer Counters).

The Dangerous Goods Prohibited poster is required in non-U.S. facilities where cargo is accepted (typically referred to as the Customer Counter Poster).

**05.01.01.03 365 Day File
49 CFR 175.33**

When a shipping paper is required, UPS will retain a copy of the shipping paper for each dangerous goods shipment at the appropriate acceptance location for a period of 13 months plus the current working month.

- A completed Acceptance Checklist must be filed with or maintained electronically for each IATA Shipper's Declaration.
- Shipping papers for air shipments must be maintained separately from those for ground shipments.

Charter Shipments:

- UPS Gateway Origins
 - Clearly mark each shipping paper "Charter Flight"
 - File the shipping paper in the 13 month file.
- Non-UPS Origins
 - The UPS acceptance auditor must:
 - Retain the shipping papers for the duration of the flight
 - Send the shipping papers to UPSCO Headquarters after the flight is completed
 - UPSCO Headquarters must file shipping papers in the 13 month file.



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**05.01.01.04 Rejected Packages
49 CFR 175.78**

Any package that is removed from transportation (i.e. “rejected”) must be clearly segregated from the operation, to prevent accidental loading for flight. When available, they should be placed in a Dangerous Goods Holding Area. Segregation rules as represented by the UPS Segregation Table must be followed in the holding area.

05.01.01.05 Contractor Personnel

Certain locations may utilize outside contractor personnel to perform certain dangerous goods functions for UPSCO such as: aircraft loading, or dangerous goods acceptance and container build-up. As agents of UPSCO, such employees must be trained as required in the appropriate FAA-approved UPSCO training program.

Inside the U.S., and where permitted by national authorities outside the U.S., contractor training must be in accordance with the requirements of the FAA-approved UPSCO training program to the extent required by their responsibilities. Such personnel loading aircraft or ULDs must be trained in the appropriate loader training within the previous 24 months.

In locations where national authorities restrict the authority to train contractor personnel, such personnel must be trained in accordance with local legislation and must be directly supervised by a person who is trained in accordance with the FAA-approved UPSCO training program.

**05.01.01.06 Loading of ULDs or Aircraft Compartments
49 CFR 175.1, 175.75, 175.78**

All visible surfaces of a shipment must be checked for the presence of hazardous material markings prior to being loaded on/into an aircraft ULD or compartment. Six-sided checks are required on all small packages weighing 70 lbs or less.

No damaged or leaking dangerous goods package may be loaded under any circumstances. No dangerous goods package may be loaded for transportation in an aircraft ULD or compartment unless the person loading the shipment has received the appropriate loader training within the previous 24 months in the FAA-approved UPSCO training program. Loaders must observe rules governing the following:

- Verification of acceptance: Each dangerous goods package will be examined to verify that it has been accepted for transportation.
- Orientation of Packages: Any dangerous goods package displaying orientation arrows must be loaded and secured in an upright direction.
- Segregation of Packages: Packages requiring segregation must not be loaded on or next to each other.



- Blocking and Bracing: Dangerous goods packages must be secured to prevent movement in flight which would result in damage or a change in orientation.
- Aggregate Quantity Limits: Dangerous goods packages must not be loaded into ULDs or inaccessible compartments in excess of aggregate quantity limits imposed by 49 CFR 175.75.
 - UPSCO may exceed these restrictions as permitted by DOT-SP11110, which waives aggregate quantity limits for the following four categories of materials:
 - Division 1.4S
 - Class 3, Packing Group III
 - Division 6.1, Packing Group III
 - Class 8, Packing Group III
 - Copies of DOT-SP11110 must be carried aboard aircraft on which it is utilized. It is maintained in the UPSCO Flight Operations Manual and issued to the operator of any chartered jet aircraft on which it will be needed.
- Accessible Cargo: Aggregate weight limits do not apply to any accessible loading configuration.

05.01.01.07 Documentation of Dangerous Goods

UPS requires dangerous goods information to be clearly marked on the outside of each ULD, or other handling device, that is intended for air transportation.

Dangerous goods loaded into any aircraft ULD must be represented by the information recorded on the outside of the ULD using the UPS Dangerous Goods Load Tag (alternate forms are only authorized for use on charter flights).

The Dangerous Goods Load Tag represents each hazard class of dangerous goods loaded on/into the ULD or aircraft compartment.

If the ULD contains packages bearing the 'Cargo Aircraft Only' label, the Dangerous Goods Load Tag indicates the ULD can only be loaded on a cargo aircraft.

The Dangerous Goods Load Tag must be removed from the ULD immediately after the ULD is unloaded.

A line is available to show the total quantity of dry ice loaded on/into the ULD.



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A qualified loader must sign the DG Load Tag to certify that no damaged or leaking dangerous goods packages have been loaded. This signature also certifies that proper loading procedures have been followed. If any changes (additions, removals, transfers of DG packages) are made to the ULD after the DG Load Tag has been completed, a qualified loader must ensure that the DG Load Tag remains accurate. This can be done either by completing a new DG Load Tag, or, if no change to relevant DG information on the existing tag is required, by adding their signature to the load tag in addition to the original loader's signature.

The loader must also confirm that the HMMS ULD Summary is accurate and correctly identifies the dangerous goods shipments loaded.

05.01.01.08 Large Jet Aircraft Loading

To be utilized for dangerous goods service, large jet aircraft are operated by UPSCO or chartered from operators with FAA-approved dangerous goods programs. Chartered aircraft must be in dedicated service to UPSCO in order to be used for this service.

All employees loading aircraft on the ramp must have completed the appropriate Loader training within the previous 24 months in the FAA-approved UPSCO training program.

All aircraft ULDs are visually inspected for evidence of leaking or damaged dangerous goods shipments as a normal part of the UPSCO aircraft loading procedures.

05.01.01.09 Oxygen Cylinders 49 CFR 175.501

In accordance with 49 CFR 175.501(b), the aggregate number of oxygen cylinders that may be loaded into an inaccessible aircraft compartment without smoke detection and fire suppression installed is limited to six cylinders. To ensure compliance on all aircraft models, UPSCO restricts loading of oxygen cylinders in belly compartments to COMAT shipments only. The total number of COMAT oxygen cylinders allowed in any one belly compartment is limited to six cylinders with an aggregate net quantity of no more than 75 kgs. With the specific exception of COMAT oxygen cylinders, UPSCO requires all packages bearing a Division 5.1 Oxidizer label (either primary or sub-risk) to be loaded in an accessible position on the aircraft.

05.01.01.10 Dry Ice Loading 49 CFR 175.900

The dry ice capacity of aircraft varies according to aircraft type. Dry ice loads must not exceed the capacity of the aircraft type, as shown in the Flight Operations Manual, Chapter 10. The same information is shown in the tables in Section 03.01 of this manual.

A line on the DG Load Tag is available to show the total quantity of dry ice loaded on/into a ULD or aircraft belly compartment.

**05.01.01.11 Magnetized Material Loading**

When known magnetized materials are to be loaded, the instructions in Section 03.01 are to be followed.

**05.01.01.12 Cargo Aircraft Only Shipments
49 CFR 175.75**

Unless exempted from in-flight accessibility requirements, UPS will load "Cargo Aircraft Only" (CAO) shipments of dangerous goods that require crew accessibility in a Class C compartment or a position identified as accessible from the charts in Section 03.01 of this manual. Such shipments will be loaded on ULDs in a manner that allows crew members and/or other authorized persons to access the packages during flight. Based on the volume of CAO shipments offered, additional aircraft positions on the main deck may be made accessible to crew members by creating an adequate walkway between subsequent positions. See Section 03.01 for CAO loading requirements by aircraft type.

05.01.01.13 Radioactive Shipments

See Section 03.01 for Radioactive II-Yellow and III-Yellow loading restrictions.

**05.01.01.14 NOTOC Completion and Delivery
49 CFR 175.33, ICAO 5.4**

All in-network UPS flight segments and commercial charters utilize a NOTOC produced from the Hazardous Materials Management System (HMMS). If necessary, an alternative NOTOC may be used if pre-approved by the Louisville Air Dangerous Goods Office.

Upon loading, all applicable dangerous goods ULD summaries are collected by the ramp supervisor or the designated employee. When the HMMS NOTOC is not available, the dangerous goods ULD summaries must be consolidated along with a Cover Sheet to produce a Manual NOTOC.

The load supervisor must verify the accuracy of the NOTOC using the procedures detailed in the UPSCO Load Planning Manual.

The load supervisor or designated employee, who has received the appropriate loader training within the past 24 months, must sign the NOTOC to confirm there is no evidence that damaged or leaking dangerous goods packages have been loaded aboard the aircraft.

Refer to Section 03.01 for specific NOTOC instructions.

If a charter flight departs from a UPS gateway, a signed copy of the NOTOC must be retained in the gateway file for 3 months plus current working month.



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If a charter flight departs from a gateway at which UPS does not have operations, a copy of the NOTOC must be transmitted to UPS Flight Operations as well as retained at the departure airport until safe arrival of the flight is confirmed. A copy of the signed NOTOC may then be mailed or shipped to UPSCO Headquarters, where it will be filed for a period of 3 months plus current working month.

05.01.01.15 Unloading Procedures

On arrival of an aircraft at an intermediate or final destination, the ramp personnel must retrieve all pages of the NOTOC as instructed in Section 03.01.

05.01.01.16 Evidence of Leaking Hazardous Materials 49 CFR 175.30, 175.90

Aircraft unload procedures require that employees examine the aircraft during unloading for any evidence of leakage during flight. All packages removed from the ULDs must be examined for evidence of leakage.

NOTE: Do not touch a damaged or leaking package. Leave the area. Notify a supervisor who will follow the Leaking Package Decision Tree established under the UPS Leaking Package Response Procedure.

No aircraft or ULD which shows evidence of dangerous goods contamination may be used until UPS-approved decontamination procedures have been followed. Details on decontamination procedures are given elsewhere (Ground Operations Manual).

05.01.01.17 Reporting of Incidents or Discrepancies 49 CFR 175.31

Any incident or discrepancy discovered in the course of transportation must be reported immediately to the Air Dangerous Goods Compliance function for correct agency reporting. See Section 01.01 of this manual.

05.01.02 Vendor Aircraft Operations

05.01.02.01 Supplemental Aircraft Operations

There are two ways in which UPSCO may supplement its aircraft fleet.

At times, when package volume requirements exceed the capacity of the UPSCO fleet, large aircraft operated by other carriers may be chartered on a dedicated basis. Such charters may either be on a fixed schedule or on an ad hoc basis.

On routes with insufficient package volume for a large jet, UPSCO contracts with other aircraft operators for regularly scheduled flights of small feeder aircraft.

**05.01.02.02 Vendor Aircraft Operation Approvals**

The status of each aircraft operator's dangerous goods program must be known to UPSCO.

In order to be utilized for dangerous goods service, operators of small feeder aircraft and supplemental large aircraft must maintain an approved dangerous goods program from FAA (with recognition of the differences in the UPSCO program) or (if certified outside the U.S.) from the appropriate national authority.

A carrier that does not have a dangerous goods program approved by the FAA or the respective national authority may not be utilized for any dangerous goods service.

Additionally, in their contracts with UPSCO, operators of small feeder aircraft must certify to UPSCO that they have an FAA approved program.

**05.01.02.03 Package Acceptance
49 CFR 175.30**

As the originating aircraft operator, UPSCO has responsibility for performing an initial acceptance audit and maintaining the required file of shipping papers. Each dangerous goods package presented to a vendor aircraft operator will be examined by UPS for verification that it has been accepted for transportation.

05.01.02.04 Package Rejection

Vendor Aircraft operators may find it necessary to remove a dangerous goods package from their service if it does not appear safe or in a suitable condition for transportation. However, it is anticipated that packages forwarded to vendor operators will be in a suitable conditions for transportation. Packages rejected by the vendor aircraft operator may be examined by UPS and forwarded by other means if found to be suitable, or forwarded by the vendor aircraft if both parties agree that it is suitable.

05.01.02.05 Aircraft Loading

Responsibility for aircraft loading is as designated below:

- Large Aircraft – Loading of large aircraft may be conducted by UPS personnel, working jointly with the operator's personnel. UPSCO dangerous goods procedures, including notification of the pilot-in-command (NOTOC), will be followed for these loading operations.
- Small Feeder Aircraft – Loading of small feeder aircraft will be the responsibility of the representative(s) of the operator. UPS employees or agents may assist in this process but only at the direction of the operator's representative(s). A shipping paper will be available for each dangerous goods package presented to the small feeder aircraft operator. The small feeder aircraft operator retains responsibility for verifying that packages are not damaged or leaking and for preparation of any NOTOC required.



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05.01.02.06 Emergency Response Information
49 CFR 172.600, 172.602

All vendor aircraft operators must ensure that for consignments for which a dangerous goods transport document is required appropriate emergency response information is made immediately available to the Pilot-in-Command for use in emergency response to accidents or incidents involving dangerous goods.

- Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (ICAO Doc 9481),
OR
- Any other document that contains similar appropriate information.

05.01.02.07 Reporting of Incidents or Discrepancies
49 CFR 175.31

Any incident or discrepancy discovered in the course of transportation must be reported immediately to the Air Dangerous Goods Compliance function for correct agency reporting. See Section 01.01 of this manual.

05.01.02.08 Incidents on Vendor Aircraft

Operators of vendor aircraft retain the reporting responsibilities for incidents that occur aboard their aircraft. UPS may assist in such reporting.

05.01.03 Military Aircraft Charter Operations

05.01.03.01 Acceptance Auditing

Inspection of dangerous goods packages conducted by Department of Defense (DoD) personnel, qualified under Paragraphs 1.2 and 1.3 of Air Force Manual (U.S.) (AFMAN) 24-204 and conducted in accordance with Attachment 28 of AFMAN 24-204, may be used to satisfy the package acceptance auditing requirement for UPSCO aircraft operating under DOT-SP 7573 or DOT-SP 9232.

05.01.03.02 Loading of ULD or Aircraft Compartments

UPSCO aircraft loaders must complete a pre-loading inspection of all dangerous goods packages and ULDs to confirm there is no evidence of damage or leakage.

05.01.03.03 NOTOC Completion and Delivery

DoD charters operating under DOT-SP 7573 or DOT-SP 9232 will normally use hazardous material notifications prepared in accordance with AFMAN 24-204, Attachment 21.

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05.01.03.04 Record Keeping

Retention of hazardous material documents, including pilot notification, for flights operating under DOT-SP 7573 or DOT-SP 9232 is the responsibility of the DoD activity-performing briefing agency and inspection functions described in AFMAN 24-204, Attachment 21. Hazardous material documentation should not be retained in UPS military charter flight files. The aircraft operator document retention requirements of 49 CFR Part 175 are not applicable to military charters operating under DOT-SP 7573 or DOT-SP 9232.



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06.01.01 Overview

06.01.01.01 General

This section establishes the procedures for preparing, accepting and transporting UPS COMAT hazmat shipments.

06.01.01.02 Scope

The term "COMAT hazmat" refers to hazmat packages prepared and shipped in support of UPSCO Airline and Aircraft Maintenance activities aboard UPS operated aircraft. These packages are not revenue packages shipped by a commercial customer. These COMAT shipments are transported either domestically or internationally for UPS Aircraft Materials Distribution or Aircraft Maintenance. When carried aboard UPSCO aircraft, COMAT shipments are distinct from any aircraft maintenance supplies shipped via any of UPS's commercial service offerings (e.g. UPS Next Day Air, UPS Worldwide Express, etc.).

Deviations from the procedures described here are not authorized.

**06.01.01.03 Parts Classification
49 CFR 173.22**

Classification of aircraft parts and maintenance supplies is performed centrally in the UPS Aircraft Materials Distribution Center. Correct classifications for each UPS part number are entered into the UPS Material Inventory Planning System (MIPS) system, which may be accessed in the field through the Materials Portal. Such classification reflects assignment to an appropriate UPS-designated packaging method.

Classification is performed by a person trained in the FAA-approved UPSCO air dangerous goods training program, as well as in job-specific requirements. Packaging assignments are performed in coordination with the Air Dangerous Goods Compliance function, in conjunction with Corporate packaging engineers and other resources as necessary.

06.01.01.04 Shipment Preparation

No person may prepare a shipment on behalf of UPS Aircraft Materials Distribution or UPS Aircraft Maintenance unless the following conditions are met.

A UPS employee preparing a shipment of COMAT Hazmat must have received training within the past 24 months in the UPS COMAT Shipping Procedures. These shipping procedures fulfill the training outline in the approved UPSCO Dangerous Goods Training Manual (Ground Personnel).

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If a contractor (e.g., aircraft maintenance vendor) performs any shipment preparation on behalf of UPS, the following conditions apply:

- The contractor must be trained as required by the U.S. DOT, or, if domiciled outside the U.S., in accordance with local legislation.
- The contractor must have received training (or a briefing, if training of third parties is not authorized by local legislation) in the UPS COMAT Hazmat Shipping Procedures or other general awareness training as prescribed by UPS.
- The contractor must have access to the assigned UPS classifications and packaging instructions through the Materials Portal or a hard copy of the information.
- The contractor must have access to the appropriate UPS packaging supplies, or packaging compatible with UPS packaging instructions.

When UPS aircraft materials shipments are sent through the normal UPS Next Day Air, Second Day Air, 3 Day Select, or Ground Services, they are subject to the same restrictions as the shipments of commercial customers, except that:

- UPS waives the company-imposed 70-LB gross weight restriction per dangerous goods package for shipments sent in support of aircraft operations.
- One original copy of each 49 CFR hazmat shipping paper, IATA shipper's declaration, and Straight Bill of Lading (whichever are applicable), must be retained for 24 months plus the current working month for each hazmat package offered for transportation.

**06.01.01.05 COMAT Hazmat Acceptance and Handling
49 CFR 175.8, 175.501**

UPS Required Procedures

UPS COMAT shipments are subject to all UPS Required Procedures as outlined in Subject 05.01.01 including the following:

- Acceptance Auditing: Note that UPSCO permits the acceptance and loading of COMAT materials not normally authorized for commercial shippers – e.g. aircraft batteries, and oxygen compressed.
- Rejected Packages: Any package that is removed from transportation (i.e. "rejected") must be placed in the dangerous goods Holding Area or returned to Aircraft Maintenance personnel. Segregation rules as represented by the UPS Segregation Table must be followed in the dangerous goods Holding Area.



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HAZARDOUS MATERIALS EXEMPTIONS OR PERMITS**

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07.01.01 Overview

**07.01.01.01 General
49 CFR 107.109**

The following Exemptions or Special Permits utilized by UPSCO are published in full in the Operations Specification Manual:

Exemption	Expiration Date	Agency Issuing, Remark and/or References
DOT-SP 7573	12/31/2014	DOT Exemption from 49 CFR Appendix B, conditions 107, 172, and 175 subject to the conditions of the Special Permit. To be used for flights under contract to the Department of Defense or the U.S. Transportation Command.
DOT-SP 9232	09/30/2015	DOT Exemption from 49 CFR 172 and 175 subject to the conditions of the Special Permit. To be used during the activation of any stage of the Civil Reserve Air Fleet Program.
DOT-SP 11110	05/31/2013	DOT Exemption from 49 CFR 171.8 (modified), 175.75(a); and Appendix B of Subpart 107 subject to the conditions of this Special Permit.

Special Permits are valid until the date of expiration as indicated on the permit. Special Permits remain valid beyond the expiration date provided the holder has submitted an application for renewal to the Associate Administrator for Hazardous Material Safety in accordance with 49 CFR 107.109(b). The Special Permit will not expire until final administrative action on the application for renewal has been taken.

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UPS AIR OPERATIONS SEGREGATION TABLE**



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07.03.01 Overview

07.03.01.01 General

14 CFR 171.7, 171.15, 171.16, 173.21, 175.10; 49 CFR 172.102, 173.21, 173.159, 175.10

UPS, through one of its many service options, provides customers the opportunity to ship batteries via air service as allowed by U.S. and international regulations. As such, UPS employees must understand company policies related to the acceptance and handling of battery shipments. This responsibility includes crew members and jumpseaters, all of who must remain aware of this issue for:

- electronic devices or
- batteries

in their professional equipment or in their personal baggage.

Dry Batteries

Dry batteries such as alkaline, nickel metal hydride, nickel cadmium and carbon zinc are governed by 49 CFR 172.102, Special Provision 130 and 49 CFR 173.21(c) and are generally recognized as being excepted from U.S. and international regulations provided they are securely packaged in a manner that prevents the generation of a dangerous quantity of heat and short circuits.

Any employee who determines or suspects a shipment of dry batteries is not packaged properly must remove the package from transportation and notify his supervisor to secure the package until such time as a qualified Acceptance Auditor can verify the package meets the applicable regulations.

Lead Acid Batteries

Lead acid batteries, common in cars, electric wheelchairs, some continuous computer power sources, and other applications are listed as Class 8 Corrosive hazardous materials in the U.S. and international regulations. As such, they are subject to specific packaging, package marking, labeling and shipping paper requirements. However, “nonspillable” lead acid batteries are provided an exception to the regulations if certain testing and marking requirements are met. These requirements (as detailed in 49 CFR 173.159) include:

- The battery must be protected against short circuits and securely packaged;
- For batteries manufactured after September 30, 1995, the battery and outer packaging must be plainly and durably marked “NONSPILLABLE” or “NONSPILLABLE BATTERY”;
- The battery must be capable of withstanding the following two tests, without leakage of battery fluid from the battery:
 - Vibration test, and



- Pressure differential test; and
- At a temperature of 55 degrees C (131 degrees F) the battery must not contain any unabsorbed free-flowing liquid, and must be designed so that electrolyte will not flow from a ruptured or cracked case.

A nonspillable battery lead acid battery not meeting the exceptions in 49 CFR 173.159 must be shipped as a fully regulated Class 8 Corrosive hazardous material.

Any employee who determines or suspects a shipment of lead acid batteries is not packaged or prepared properly must remove the package from transportation and notify his supervisor to secure the package until such time as a qualified Acceptance Auditor can verify the package meets the applicable regulations.

Lithium Batteries

Lithium batteries, both rechargeable and non-rechargeable, common in computers, cell phones, cameras, and other small electronic devices are listed as Class 9 Miscellaneous hazardous materials in the U.S. and international regulations. As such, they are subject to specific packaging, package marking, labeling and shipping paper requirements. However, lithium batteries are provided an exception to the regulations if the batteries meet certain testing requirements and contain a limited amount of lithium metal or “equivalent lithium content.”

Exceptions for packages containing lithium batteries are contained in Special Provisions 188 and 189 in 49 CFR 172.102.

188 Small lithium cells and batteries. Lithium cells or batteries, including cells or batteries packed with or contained in equipment, are not subject to any other requirements of this subchapter if they meet all of the following:

1. Primary lithium batteries and cells.
 - A. Primary lithium batteries and cells are forbidden for transport aboard passenger-carrying aircraft. The outside of each package that contains primary (nonrechargeable) lithium batteries or cells must be marked “PRIMARY LITHIUM BATTERIES-FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT” or “LITHIUM METAL BATTERIES-FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT” on a background of contrasting color. The letters in the marking must be:
 - (1) At least 12 mm (0.5 inch) in height on packages having a gross weight of more than 30 kg (66 pounds); or
 - (2) At least 6 mm (0.25 inch) on packages having a gross weight of 30 kg (66 pounds) or less, except that smaller font may be used as necessary to fit package dimensions; and



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- B. The provisions of paragraph 1.A. do not apply to packages that contain 5 kg (11 pounds) net weight or less of primary lithium batteries or cells that are contained in or packed with equipment and the package contains no more than the number of lithium batteries or cells necessary to power the piece of equipment;
2. For a lithium metal or lithium alloy cell, the lithium content is not more than 1.0 g. For a lithium-ion cell, the equivalent lithium content is not more than 1.5 g;
3. For a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2.0 g. For a lithium-ion battery, the aggregate equivalent lithium content is not more than 8 g;
4. Effective October 1, 2009, the cell or battery must be of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria (IBR; see 14 CFR 171.7 of this subchapter);
5. Cells or batteries are separated or packaged in a manner to prevent short circuits and are packed in a strong outer packaging or are contained in equipment;
6. Effective October 1, 2008, except when contained in equipment, each package containing more than 24 lithium cells or 12 lithium batteries must be:
 - A. Marked to indicate that it contains lithium batteries, and special procedures should be followed if the package is damaged;
 - B. Accompanied by a document indicating that the package contains lithium batteries and special procedures should be followed if the package is damaged;
 - C. Capable of withstanding a 1.2 meter drop test in any orientation without damage to cells or batteries contained in the package, without shifting of the contents that would allow short circuiting and without release of package contents; and
 - D. Gross weight of the package may not exceed 30 kg (66 pounds). This requirement does not apply to lithium cells or batteries packed with equipment;
7. Electrical devices must conform to 14 CFR 173.21;
8. For transportation by aircraft, a telephone report in accordance with 14 CFR 171.15(a) is required if 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 lithium battery. For all modes of transportation, a written report submitted, retained, and updated in accordance with 14 CFR 171.16 is required if a fire, violent rupture, explosion or dangerous evolution of heat occurs as a direct result of a lithium battery or battery-powered device; and
9. Lithium batteries or cells are not authorized aboard an aircraft in checked or carry-on luggage except as provided in 14 CFR 175.10.



189 "Medium lithium cells and batteries. Effective October 1, 2008, when transported by motor vehicle or rail car, lithium cells or batteries, including cells or batteries packed with or contained in equipment, are not subject to any other requirements of this subchapter if they meet all of the following..."

1. The lithium content anode of each cell, when fully charged, is not more than 5 grams.
2. The aggregate lithium content of the anode of each battery, when fully charged, is not more than 25 grams.
3. The cells or batteries are of a type proved to meet the requirements of each test in the UN Manual of Tests and Criteria (IBR; see 14 CFR 171.7 of this subchapter). A cell or battery and equipment containing a cell or battery that was first transported prior to January 1, 2006 and is of a type proven to meet the criteria of Class 9 by testing in accordance with the tests in the UN Manual of Tests and Criteria, Third revised edition, 1999, need not be retested.
4. Cells or batteries are separated or packaged in a manner to prevent short circuits and are packed in a strong outer packaging or are contained in equipment.
5. The outside of each package must be marked "LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL" on a background of contrasting color, in letters:
 - A. At least 12 mm (0.5 inch) in height on packages having a gross weight of more than 30 kg (66 pounds); or
 - B. At least 6 mm (0.25 inch) on packages having a gross weight of 30 kg (66 pounds) or less, except that smaller font may be used as necessary to fit package dimensions.
6. Except when contained in equipment, each package containing more than 24 lithium cells or 12 lithium batteries must be:
 - A. Marked to indicate that it contains lithium batteries, and special procedures should be followed if the package is damaged;
 - B. Accompanied by a document indicating that the package contains lithium batteries, and special procedures should be followed if the package is damaged;
 - C. Capable of withstanding a 1.2 meter drop test in any orientation without damage to cells or batteries contained in the package, without shifting of the contents that would allow short circuiting and without release of package contents; and,
 - D. Gross weight of the package may not exceed 30 kg (66 pounds). This requirement does not apply to lithium cells or batteries packed with equipment.
7. Electrical devices must conform to 14 CFR 173.21 of this subchapter; and



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8. A written report submitted, retained, and updated in accordance with §171.16 is required if 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 lithium battery or battery-powered device.

Any employee who determines or suspects a shipment of lithium batteries is not packaged or prepared properly must remove the package from transportation and notify his supervisor to secure the package until such time as a qualified Acceptance Auditor can verify the package meets the applicable regulations.

Crew members and jumpseaters are responsible to ensure that no personal or professional item of luggage containing lithium batteries (except those installed in consumer electronic devices) is stowed in an inaccessible compartment of the aircraft.

As of 1 January 2008 spare lithium batteries carried by passengers or crew must be in accordance with the provisions of 49 CFR 175.10(a)(17)

1. 49 CFR 175.10 (a)(17) Except as provided in 14 CFR 173.21 of this subchapter, consumer electronic and medical devices (watches, calculating machines, cameras, cellular phones, lap-top and notebook computers, camcorders, etc.) containing lithium cells or batteries and spare lithium batteries and cells for these devices, when carried by passengers or crew members for personal use. Each spare battery 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) and carried in carry-on baggage only. In addition, each installed or spare battery must not exceed the following:
 - A. For a lithium metal battery, a lithium content of not more than 2 grams per battery; or
 - B. For a lithium-ion battery, an aggregate equivalent lithium content of not more than 8 grams per battery, except that up to two batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried.

NOTE: Shipments of Primary lithium batteries, within the UPS small package service, are only accepted to those destinations in Alaska as specified in the Alaska Class 9 CAO Zip code list on the UPS website.

Recalled or Recycled Batteries

UPS does not allow transportation of recalled or recycled batteries by air. However, these batteries can be shipped via UPS Ground service within the 48 contiguous states.

- Air level services include Next Day Air, 2nd Day Air, 3 Day Select, International Express, and International Expedited.

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- No recycled or recalled batteries are allowed to be shipped between the continental U.S. and Alaska, Hawaii, or Puerto Rico, where aircraft must always be used.

Any employee who recognizes or suspects a shipment of “recalled or recycled” batteries being transported within the air network must remove the package from transportation and notify his supervisor to secure the package until such time as a qualified Acceptance Auditor can verify the package meets the applicable regulations.

Crew members and jumpseaters are responsible for verifying that batteries and electronic items they intend to carry on their person, in professional gear or in their personal baggage meet the requirements outlined in this document. Any battery or electronic device that does not meet the requirements of this appendix must not be carried aboard a UPS aircraft.

Other Battery Powered Devices

Batteries of all types and all battery powered devices must comply with 49 CFR 173.21(c) which describes as forbidden those materials and packages which are, “Electrical devices which are likely to create sparks or generate a dangerous quantity of heat, unless packaged in a manner which precludes such an occurrence.”

Any employee who determines or suspects a shipment of batteries or battery powered devices is not packaged properly must remove the package from transportation and notify his supervisor to secure the package until such time as a qualified Acceptance Auditor can verify the package meets the applicable regulations.

Crew members and jumpseaters are responsible for verifying that batteries and electronic items they intend to carry on their person, in professional gear or in their personal baggage meet the requirements outlined in this document. Any battery or electronic device that does not meet the requirements of this appendix must not be carried aboard a UPS aircraft.



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SUPPLEMENTAL HAZMAT PACKAGE LOADING
EXERCISE PROCEDURE**

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07.04.01 Overview

07.04.01.01 General

Compliant processing of hazardous material packages depends upon each loader's ability to see, recognize, and interpret a wide variety of package markings. This procedure will strengthen that ability by providing monthly review, repetition, and practice in hazardous material marking recognition.

Locations responsible for loading AK, HI, and PR "ground" volume into air containers will conduct monthly hazardous material package marking reviews and drills. Monthly instructions and materials will be published on the Hazardous Material Support Center web site. Local management will observe each employee's drill performance, and provide coaching and appropriate corrective action to employees who do not perform successfully. Drill results will be recorded for each employee on an appropriate document and filed within the operation. The records will be audited as part of local and corporate regulatory compliance audits. Exercises for Anchorage will include drills specifically addressing materials not acceptable to passenger carriers.

Affected Operations

These procedures will apply to UPS operations in:

- Jacksonville, FL (operations loading "ground service" volume in air containers)
- Ontario, CA (all employees engaged in loading containers for air transport to AK and HI)
- Louisville, KY (all employees engaged in loading containers for air transport to AK, HI, and PR)
- Anchorage, AK (all employees loading or offering packages to non-UPS air carriers)