

- (d) to provide aid in connection with search and rescue operations during flight;
- (e) vehicles carried in aircraft designed or modified for vehicle ferry operations if all of the following requirements are met:
 1. authorization has been given by the appropriate authorities of the States concerned, and such authorities have prescribed specific terms and conditions for the particular operator's operation;
 2. vehicles are secured in an upright position;
 3. fuel tanks are so filled as to prevent spillage of fuel during loading, unloading and transit; and
 4. adequate ventilation rates are maintained in the aircraft compartment in which the vehicles are carried.

(f) dangerous goods that are required for the propulsion of the means of transport or the operation of its specialized equipment during transport (e.g. refrigeration units) or that are required in accordance with the operating regulations (e.g. fire extinguishers) (see Subsection 2.5).

- (g) contained within items of excess baggage (see definition of "excess baggage" in Appendix A—Glossary) being sent as cargo provided that:
 1. the excess baggage has been consigned as cargo by or on behalf of a passenger;
 2. the dangerous goods may only be those that are permitted by and in accordance with 2.3 to be carried in checked baggage;
 3. the excess baggage is marked with the words "Excess baggage consigned as cargo".

1.2.7.2 Provision must be made to stow and secure dangerous goods transported under 1.2.7.1 (a), (b), (c) and (d) during take-off and landing and at all other times when deemed necessary by the pilot-in-command.

1.2.7.3 The dangerous goods must be under the control of trained personnel during the time when they are in use on the aircraft.

1.2.7.4 Dangerous goods transported under 1.2.7.1 (a), (b), (c) and (d) may be carried on a flight made by the same aircraft before or after a flight for the purposes identified above, when it is impracticable to load or unload the dangerous goods immediately before or after the flight, subject to the following conditions:

- (a) the dangerous goods must be capable of withstanding the normal conditions of air transport;
- (b) the dangerous goods must be appropriately identified (e.g. by marking or labelling);
- (c) the dangerous goods may only be carried with the approval of the operator;
- (d) the dangerous goods must be inspected for damage or leakage prior to loading;
- (e) loading must be supervised by the operator;
- (f) the dangerous goods must be stowed and secured in the aircraft in a manner that will prevent any movement in flight which would change their orientation;
- (g) the pilot-in-command must be notified of the dangerous goods loaded onboard the aircraft and their

loading location. In the event of a crew change, this information must be passed to the next crew;

- (h) all personnel must be trained commensurate with their responsibilities;
- (i) the provisions of 9.5.2 and 9.6.1 apply.

1.2.8 General Transport Requirements

STATE VARIATIONS: CNG-01, HKG-01, ING-01, MYG-01, NLG-06, SGG-01, VCG-01/03

Except as otherwise provided for in these Regulations, no person may offer or accept dangerous goods for air transport unless those goods are properly classified, documented, certificated, described, packaged, marked, labelled and in the condition for shipment required by these Regulations. If a person performs a function required by these Regulations on behalf of the person who offers the dangerous goods for transport by air or on behalf of the operator, that person must perform that function in accordance with the requirements of these Regulations. No person may transport dangerous goods by air unless those goods are accepted, handled and transported in accordance with these Regulations. No person may label, mark, certify or offer a packaging as meeting the requirements of these Regulations unless that packaging is manufactured, fabricated, marked, maintained, reconditioned or repaired as required by these Regulations. No person shall carry dangerous goods or cause dangerous goods to be carried aboard an aircraft in either checked or carry-on baggage or on his person, unless permitted by Subsection 2.3.

Note:

When dangerous goods intended for air transport are carried by surface transport to or from an airport, any other applicable national or modal transport requirements should also be met in addition to those that are applicable for the goods when carried by air.

1.2.9 Dangerous Goods Packages Opened by Customs and Other Authorities

Any package opened during an inspection must, before being forwarded to the consignee, be restored by qualified persons to a condition, which complies with these Regulations.

1.3 Shipper's Responsibilities

1.3.1 Compliance

1.3.1.1 A shipper must comply fully with these Regulations when offering a consignment of dangerous goods to IATA Member and associate Member airlines, and to airlines participating in IATA interline agreements for cargo. In addition, shippers must comply with any applicable regulations set forth by the States of origin, transit and destination.

1.3.1.2 These Regulations are fully compliant with the ICAO *Technical Instructions*. A shipper, offering articles or substances in violation of these Regulations, may be in

breach of national law and may be subject to legal penalties.

1.3.1.3 In these Regulations, the words "shall" and "must" are used to indicate a mandatory requirement. The words "should" and "may" indicate a preferred requirement and are not binding.

1.3.1.4 It is the shipper's responsibility to ensure that all of the applicable air transport requirements are met. The items indicated in 1.3.2 are provided as examples and do not include the complete list of all the applicable requirements for air transport.

1.3.2 Specific Responsibilities

STATE VARIATIONS: BEG-04, BHG-01, CAG-06, NLG-03, SAG-02, USG-04

△ OPERATOR VARIATIONS: 5X-02/03/04, AF-03, AY-01, D0-01, D5-04, EY-02, GA-01, IY-01, JP-01, KE-02, KL-03, KZ-01, LA-01/07/12, LC-05, ME-03, MH-01, MK-03/06, MS-02, NG-01, NH-01, OM-01, OS-01, OU-01, OZ-01, QT-04, QY-01, RJ-01, TK-04, US-01, UU-04/07, VN-01, ZW-01

Before any package or overpack of dangerous goods is offered for air transport, the shipper must comply with the following specific responsibilities:

- (a) a shipper must provide such information to his employees as will enable them to carry out their responsibilities with regard to the transport of dangerous goods by air;
- (b) the shipper must ensure that the articles or substances are not prohibited for transport by air (see Subsection 2.1 and Subsection 4.2);
- (c) the articles or substances must be properly identified, classified, packed, marked, labelled, documented and be in the condition for transport in accordance with these Regulations;
- (d) before a consignment of dangerous goods is offered for air transport, all relevant persons involved in its preparation must have received training to enable them to carry out their responsibilities, as detailed in Subsection 1.5. Where a shipper does not have trained staff, the "relevant persons" may be interpreted as applying to those employed to act on the shipper's behalf and undertake the shipper's responsibilities in the preparation of the consignment. However, such persons must be trained as required by Subsection 1.5;
- (e) the dangerous goods are packaged in compliance with all applicable air transport requirements including:
 - inner packaging and the maximum quantity per package limits;
 - appropriate types of packaging according to the packing instructions;
 - other applicable requirements indicated in the packing instructions including:
 - single packagings may be forbidden;
 - only inner and outer packagings indicated in the packing instructions are permitted;

— inner packaging may need to be packed in intermediate packagings; and

— certain dangerous goods must be transported in packagings meeting a higher performance level.

- appropriate closure procedures for inner and outer packagings (see 5.0.2.7);
- the compatibility requirements as specified in the applicable packing instructions and in 5.0.2;
- the absorbent materials requirements in the packing instructions when applicable; and
- the pressure differential requirement of 5.0.2.9.

1.3.3 Dangerous Goods in Consolidations

OPERATOR VARIATIONS: AZ-01, BR-06, CA-01, CI-03, CZ-02, GA-02, IC-12, IJ-11, IR-02, JK-02, KE-01, KQ-01, KZ-05, LH-02, ME-02, MH-05, MU-02, OM-06, OU-14, OZ-02, PX-03, RJ-02, SK-07, SV-03, SW-03, TK-03, TY-02, UX-03, VN-12

Dangerous Goods are accepted in consolidations under the conditions specified in 1.3.3.1 to 1.3.3.6.

1.3.3.1 Dangerous goods may be consolidated with goods not subject to these Regulations. Dangerous goods in consolidations are subject to the acceptance check described in 9.1.4. Any delays caused by discrepancies found during the check may result in delay to the complete consolidation.

1.3.3.2 Dangerous goods in consolidations must be identified, classified, packed, marked, labelled and documented in accordance with these Regulations and be free from any indication of damage or leakage.

1.3.3.3 Packages and overpacks containing dangerous goods must be offered to the operator separately from the goods in the consolidation that are not subject to these Regulations. Dangerous goods in consolidations are not acceptable in unit load devices, unless specifically permitted by these Regulations (see 9.1.4.1).

1.3.3.4 A Shipper's Declaration for Dangerous Goods is required for each component consignment.

1.3.3.5 Consolidations containing any "Cargo Aircraft Only" dangerous goods must be shipped on Cargo Aircraft.

1.3.3.6 Before a consignment is offered to an operator for transport, the shipper, the freight forwarder and the cargo agent must:

- ensure that the dangerous goods are in full compliance with the Regulations;
- segregate dangerous goods contained in a consolidation from goods which are not subject to the Regulations, and offer them separately;
- ensure that the dangerous goods are not loaded in a unit load device other than those permitted under 9.1.4.1;
- for all consignments, check documents and the exterior of packages for indication of hidden hazards.

1.3.4 Retention of Documents

STATE VARIATION: USG-01

1.3.4.1 The shipper must ensure that at least one copy of the documents, appropriate to the transport by air of a dangerous goods consignment, is retained for a minimum period of three months. As a minimum, the documents which must be retained are the Shipper's Declaration for Dangerous Goods and any other transport documents applicable to the consignment as specified in these Regulations.

1.3.4.2 Where the documents are kept electronically or in a computer system, the shipper must be able to reproduce them in a printed form.

1.4 Operator's Responsibilities

STATE VARIATIONS: NLG-06, USG-13

In transporting dangerous goods, an operator must comply with the requirements of Section 9 for:

- Acceptance;
- Storage;
- Loading;
- Inspection;
- Provision of Information, including emergency response information;
- Reporting;
- Retention of Records;
- Training.

Note:

When an operator, its subsidiary or an agent of the operator offers a consignment of dangerous goods for air transport then the operator, its subsidiary or the agent is a shipper and must comply with shipper's responsibilities (see Subsection 1.3). This is applicable even if the consignment is to be transported on its own or on other operator's services.

1.5 Training Requirements

STATE VARIATIONS: AEG-02, CAG-18, HKG-01, NLG-06

1.5.0 General

1.5.0.1 The successful application of regulations concerning the transport of dangerous goods and the achievement of their objectives are greatly dependent on the appreciation by all individuals concerned of the risks involved and on a detailed understanding of the Regulations. This can only be achieved by properly planned and maintained initial and recurrent training programmes for all persons concerned in the transport of dangerous goods.

1.5.0.2 Personnel identified in the categories specified in Tables 1.5.A or 1.5.B must be trained or training must be verified prior to the person performing any duty specified in Tables 1.5.A or 1.5.B

1.5.0.3 Recurrent training must be provided within 24 months of previous training to ensure knowledge is current. However, if recurrent training is completed within the final 3 months of validity of previous training, the period of validity extends from the date on which the recurrent training was completed until 24 months from the expiry date of that previous training.

1.5.0.4 A test must be provided following dangerous goods training to verify understanding of the regulations. Confirmation is required of successful completion of the test.

1.5.1 Training Programmes

Initial and recurrent training programmes must be established and maintained by or on behalf of:

- operators;
- ground handling agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transfer or other processing of cargo, mail or stores;
- ground handling agencies located at an airport which perform, on behalf of the operator, the act of processing passengers;
- agencies, not located at an airport, which perform, on behalf of the operator, the act of checking in passengers;
- freight forwarders;
- shippers of dangerous goods, including packers and persons' or organisations' undertaking the responsibilities of the shipper; and
- agencies engaged in the security screening of passengers and their baggage and/or cargo, mail or stores.

1.5.2 Training Curricula

1.5.2.1 Personnel must be trained in the requirements commensurate with their responsibilities.

1.5.2.2 Training must include:

- (a) general familiarization training—which must be aimed at providing familiarity with the general provisions;
- (b) function specific training—which must provide detailed training in the requirements applicable to the function for which that person is responsible; and
- (c) safety training—which must cover the hazards presented by dangerous goods, safe handling and emergency response procedures.

1.5.2.3 In planning training courses, the various categories of personnel must be familiar with minimum subject matter as indicated in Table 1.5.A.

1.5.3 Training Curricula—"No Carry" Operators

1.5.3.1 Operators that do not carry dangerous goods as cargo, mail or stores must ensure that personnel must receive training in the requirements commensurate with their responsibilities.

1.5.3.2 The subject matter to which their various categories of personnel must be familiar is indicated in Table 1.5.B.

1.5.4 Approvals

Dangerous goods training programmes for operators' personnel must be subjected to review and approval by the appropriate authority of the State of the operator. Dangerous goods training programmes for all categories of staff shown in 1.5.1, other than operators, should be reviewed and approved as determined by the appropriate national authority.

1.5.5 Record of Training

1.5.5.1 A record of training must be maintained, which must include:

- the individual's name;
- the most recent training completion date;
- a description, copy or reference to training materials used to meet the training requirement;

- the name and address of the organization providing the training; and
- evidence, which shows that a test has been completed satisfactorily.

1.5.5.2 The training records must be retained by the employer for a minimum period of thirty-six months from the most recent training completion date and must be made available upon request to the employee or appropriate national authority.

1.5.6 Instructor Qualifications

1.5.6.1 Unless otherwise provided for by the appropriate national authority, instructors of initial and recurrent dangerous goods training programmes must have adequate instructional skills and have successfully completed a dangerous goods training programme in the applicable category or Category 6 of Table 1.5.A, prior to delivering such a dangerous goods training programme.

1.5.6.2 Instructors delivering initial and recurrent dangerous goods training programmes must at least every 24 months deliver such a course, or in the absence of this attend recurrent training.

TABLE 1.5.A
Minimum Requirements for Training Curricula (1.5.2)

1
1.5

Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum	Shippers and packers		Freight forwarders			Operators and ground handling agents					Security screeners	
	1	2	3	4	5	6	7	8	9	10	11	12
General philosophy	X	X	X	X	X	X	X	X	X	X	X	X
Limitations	X		X	X	X	X	X	X	X	X	X	X
General requirements for shippers	X		X			X						
Classification	X	X	X			X						X
List of dangerous goods	X	X	X			X				X		
General packing requirements	X	X	X			X						
Packing instructions	X	X	X			X						
Labelling and marking	X	X	X	X	X	X	X	X	X	X	X	X
Shipper's Declaration and other relevant documentation	X		X	X		X	X					
Acceptance procedures						X						
Recognition of Undeclared Dangerous Goods	X	X	X	X	X	X	X	X	X	X	X	X
Storage and loading procedures					X	X		X		X		
Pilots' notification						X		X		X		
Provisions for passengers and crew	X	X	X	X	X	X	X	X	X	X	X	X
Emergency procedures	X	X	X	X	X	X	X	X	X	X	X	X

KEY

1. Shippers and persons undertaking the responsibilities of shippers, including operator's staff acting as shippers, operator's staff preparing dangerous goods as Company Materials (COMAT)
2. Packers
3. Staff of freight forwarders involved in processing dangerous goods
4. Staff of freight forwarders involved in processing cargo, mail or stores (other than dangerous goods)
5. Staff of freight forwarders involved in the handling, storage and loading of cargo, mail or stores
6. Operator's and ground handling agent's staff accepting dangerous goods
7. Operator's and ground handling agent's staff accepting cargo, mail or stores (other than dangerous goods)
8. Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo, mail or stores and baggage
9. Passenger handling staff
10. Flight crew members and load planners
11. Crew members (other than flight crew members)
12. Security staff who deal with the screening of passengers and their baggage and cargo, mail or stores, e.g. security screeners, their supervisors and staff involved in implementing security procedures.

TABLE 1.5.B
Minimum Requirements for Training Curricula for "No Carry" Operators (1.5.3)

Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum	Operators and ground handling agents				
	7	8	9	10	11
General philosophy	X	X	X	X	X
Limitations	X	X	X	X	X
Labelling and marking	X	X	X	X	X
Shipper's Declaration and other relevant documentation	X				
Recognition of Undeclared Dangerous Goods	X	X	X	X	X
Provisions for passengers and crew	X	X	X	X	X
Emergency procedures	X	X	X	X	X

KEY

7. Operator's and ground handling agent's staff accepting cargo, mail or stores (other than dangerous goods)
8. Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo, mail or stores and baggage
9. Passenger handling staff
10. Flight crew members and load planners
11. Crew members (other than flight crew members).

Notes:

1. Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in Table 1.5.A and Table 1.5.B. For example, in respect of classification, staff involved in implementing security procedures (e.g. screeners and their supervisors) need only be trained in the general properties of dangerous goods.
2. A set of detailed dangerous goods training programmes for the various categories of personnel, prepared jointly with ICAO, is available from IATA. These training programmes correspond to the categories of the personnel shown in Table 1.5.A. Also available is a set of guidelines for instructors of dangerous goods courses.
3. The categories of personnel identified in Table 1.5.A and Table 1.5.B are not all encompassing. Personnel employed by or interacting with the aviation industry in areas such as passenger reservation centres, and engineering and maintenance, except when acting in a capacity identified in Table 1.5.A or Table 1.5.B, should be provided with dangerous goods training in accordance with 1.5.2.

IATA Dangerous Goods Training Workbooks	Book 1	Book 2	Book 3	Book 4	Book 5
Category of Personnel	1, 2, 3, 6	10	9, 11, 12	5, 8	4, 7

Workbook 1—Shippers; Packers; Dangerous Goods Acceptance Personnel

Workbook 2—Flight Crew; Load Planners

Workbook 3—Cabin Crew; Passenger Handling Personnel; Security Screening Personnel

Workbook 4—Ramp and Warehouse Personnel

Workbook 5—General Cargo Acceptance Personnel