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**PART 12**

**AIR**

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***Background***

*There are many air carriers who delegate to third parties some of the duties that are assigned to them in the ICAO Technical Instructions and in this Part.*

*There is nothing in these Regulations that hinders this practice but it should be noted by air carriers that delegating responsibility for certain duties does not include delegating liability for those duties. This means that if an air carrier contracts a third party to provide, for example, cargo handling, acceptance or loading activities, the approval programme for training mandated by the ICAO Technical Instructions and carried out by the Civil Aviation Directorate, Transport Canada, applies to those third party activities.*

*The ICAO Technical Instructions refers to the air carrier as the operator.*

**AIR****Definitions**  
**SOR/2008-34**

Definitions for the following terms, used in this Part, are provided in Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases:

<i>accidental release</i>	<i>gas</i>	<i>person</i>
<i>aircraft</i>	<i>gross mass</i>	<i>prescribed</i>
<i>biological product</i>	<i>handling</i>	<i>primary class</i>
<i>cargo aircraft</i>	<i>ICAO Technical Instructions</i>	<i>protective direction</i>
<i>carrier</i>	<i>IMDG Code</i>	<i>public safety</i>
<i>Category A</i>	<i>imminent accidental release</i>	<i>safety mark</i>
<i>Category B</i>	<i>infectious substance</i>	<i>safety requirements</i>
<i>certification safety mark</i>	<i>inspector</i>	<i>shipping document</i>
<i>49 CFR</i>	<i>in standard</i>	<i>shipping name</i>
<i>class</i>	<i>in transport</i>	<i>small means of containment</i>
<i>classification</i>	<i>large means of containment</i>	<i>solid</i>
<i>compatibility group</i>	<i>liquid</i>	<i>special provision</i>
<i>consignment</i>	<i>means of containment</i>	<i>standardized means of containment</i>
<i>consignor</i>	<i>means of transport</i>	<i>substance</i>
<i>cylinder</i>	<i>net explosives quantity</i>	<i>Supplement to the ICAO Technical Instructions</i>
<i>dangerous goods</i>	<i>offer for transport</i>	<i>technical name</i>
<i>dangerous goods safety mark</i>	<i>packing group</i>	<i>UN number</i>
<i>emergency response assistance plan or ERAP or ERP</i>	<i>passenger</i>	<i>UN standardized means of containment</i>
<i>flash point</i>	<i>passenger carrying aircraft</i>	<i>vapour</i>
	<i>permit for equivalent level of safety</i>	

**International and Domestic Transport by Aircraft****12.1 General Requirements**

- (1) A person who handles, offers for transport or transports dangerous goods by aircraft between Canada and another country must do so in accordance with the ICAO Technical Instructions and the following provisions of these Regulations:
- (a) in Part 1, Coming into Force, Repeal, Interpretation, General Provisions and Special Cases,
    - (i) section 1.7, Safety Requirements, Documents, Safety Marks,
    - (ii) paragraphs 1.8(a) and (b), Prohibition: Explosives,
    - (iii) section 1.9, Use of the Most Recent Version of the ICAO Technical Instructions, the IMDG Code or 49 CFR,
    - (iv) section 1.12, Evidence: Safety Marks, Prescribed Documents,
    - (v) section 1.13, Defence: Due Diligence,
    - (vi) **Repealed** SOR/2002-306

- (vii) section 1.20, National Defence, and
  - (viii) section 1.43, Class 7, Radioactive Materials;
  - (b) in Part 2, Classification,
    - (i) section 2.2, Responsibility for Classification,
    - (ii) section 2.36, Infectious Substances,  
*SOR/2008-34*
    - (iii) section 2.37, General, Class 7, Radioactive Materials, and
    - (iv) subparagraphs 2.43(b)(iv) and (v), concerning classifying in Class 9 dangerous goods that are environmentally hazardous substances;
  - (c) in Part 3, Documentation,
    - (i) section 3.1, Consignor Responsibilities,
    - (ii) subsections 3.2(1), (2), (3), (5) and (6), Carrier Responsibilities,
    - (iii) subsection 3.4(1), Legibility and Language,
    - (iv) paragraph 3.5(1)(f) and subsection 3.5(2), concerning a 24-hour number on a shipping document,
    - (v) subsections 3.6(1) and (2), which require the emergency response assistance plan reference number and telephone number on a shipping document, and
    - (vi) section 3.11, Keeping Shipping Document Information;
  - (d) in Part 4, Dangerous Goods Safety Marks,
    - (i) section 4.2, Misleading Dangerous Goods Safety Marks,
    - (ii) section 4.4, Consignor Responsibilities,
    - (iii) subsection 4.5(1), Carrier Responsibilities,
    - (iv) subsection 4.7(1), Labels and Placards: Size and Orientation, and
    - (v) section 4.9, Removal of Dangerous Goods Safety Marks;
  - (e) in Part 5, Means of Containment,
    - (i) section 5.2, Requirements for a Standardized Means of Containment to Be in Standard,
    - (ii) section 5.3, Certification Safety Marks on a Means of Containment,
    - (iii) section 5.6, UN Standardized Means of Containment, and
    - (iv) section 5.10, Means of Containment for Class 2, Gases;
  - (f) Part 6, Training;
  - (g) Part 7, Emergency Response Assistance Plan;
  - (h) Part 8 (Reporting Requirements);  
*SOR/2016-95*
  - (i) Part 13, Protective Direction; and
  - (j) Part 14, Permit for Equivalent Level of Safety.
- (2) A person who handles, offers for transport or transports dangerous goods by aircraft within Canada must do so in accordance with the ICAO Technical Instructions and the provisions of these Regulations referred to in subsection (1).
- (3) Despite subsection (2), a person may handle, offer for transport or transport dangerous goods by aircraft within Canada in accordance with the requirements of sections 12.4 to 12.17.

## 12.2 Shipping Document

The shipping document for dangerous goods transported by aircraft must

- (a) be completed in accordance with Chapter 4, Documentation, of Part 5, Shipper's Responsibilities, of the ICAO Technical Instructions; and  
*SOR/2008-34*
- (b) show the information required for the dangerous goods by the ICAO Technical Instructions on a document that has, on the left and right margins, red hatchings that are oriented to the right or to the left.  
*SOR/2008-34*

## 12.3 Information to Pilot-in-command

Despite subsection 12.1(1), the following text replaces subsection 4.1.5 in section 4.1, Information to the pilot-in-command, of Chapter 4, Provision of information, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions:

"4.1.5 The information provided to the pilot-in-command must be presented on a dedicated form and not by means of air waybills, dangerous goods transport documents, invoices, etc."

*SOR/2014-152*

### Domestic Transport by Aircraft

## 12.4 Explosives, Class 1.4S

- (1) A person may handle, offer for transport or transport by aircraft within Canada explosives included in Class 1.4S if  
*SOR/2008-34*
  - (a) the person complies with the ICAO Technical Instructions, other than Part 4, Packing Instructions, and sections 1.1 to 1.3 of Chapter 1, General, sections 2.1 to 2.4.1 and 2.4.3 to 2.5 of Chapter 2, Package markings, Chapter 3, Labelling, and Chapter 4, Documentation, of Part 5, Shipper's Responsibilities;  
*SOR/2002-306*
  - (b) when the consignor is not the air carrier, the consignor notifies the air carrier of the presence of the explosives before offering them for transport;
  - (c) the explosives are one or more of the explosives set out in the following table:

Table

UN Number	Shipping Name
UN0012	CARTRIDGES FOR WEAPONS, INERT PROJECTILE, or CARTRIDGES, SMALL ARMS
UN0014	CARTRIDGES FOR WEAPONS, BLANK, or CARTRIDGES, SMALL ARMS, BLANK
UN0055	CASES, CARTRIDGE, EMPTY, WITH PRIMER
UN0323	CARTRIDGES, POWER DEVICE
UN0405	CARTRIDGES, SIGNAL

- (d) the calibre of cartridges with the UN number UN0012 or UN0014 is
  - (i) less than 50 calibres, in the case of cartridges for rifles or pistols, or
  - (ii) greater than or equal to 8 gauge, in the case of cartridges for shotguns;
- (e) the gross mass of each means of containment is less than or equal to 25 kg;

- (f) the explosives are placed in an inner means of containment that is a box, in metal or plastic clips or in partitions that fit snugly in an outer means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety;  
*SOR/2008-34*
  - (g) the primers are protected from accidental initiation; and
  - (h) each of the outer means of containment is marked with the gross mass in kilograms and the words “Explosives — Excepted” or “Explosifs — Exceptés”, in letters at least 25 mm high and in a colour that contrasts with the background colour of the means of containment.
- (2) Despite paragraph 1.1.2(n) of Chapter 1, Provisions for dangerous good carried by passengers or crew, of Part 8, Provisions Concerning Passengers and Crew, of the ICAO Technical Instructions, ammunition, or ammunition loaded in a firearm, with the UN number and shipping name UN0012, CARTRIDGES FOR WEAPONS, INERT PROJECTILE, or CARTRIDGES, SMALL ARMS, or UN0014, CARTRIDGES FOR WEAPONS, BLANK, or CARTRIDGES, SMALL ARMS, BLANK, may be transported on board an aircraft by a peace officer as defined in section 3 of the “Canadian Aviation Security Regulations, 2012” or by an in-flight security officer.  
*SOR/2014-152*

## 12.5 Forbidden Explosives

- (1) A person may handle, offer for transport or transport by aircraft within Canada explosives that are forbidden for transport in any of columns 10 to 13 of Table 3-1, Dangerous Goods List, in Chapter 2, Arrangement of the dangerous goods list (Table 3-1), of Part 3, Dangerous Goods List, Special Provisions and Limited and Excepted Quantities, of the ICAO Technical Instructions if  
*SOR/2014-152*
- (a) the person complies with
    - (i) paragraphs 12.1(1)(a) to (j),
    - (ii) the quantity limits and the packing instructions set out in columns 10 to 13 of Table S-3-1, Supplementary Dangerous Goods List, in Chapter 2, Dangerous goods list, of Part S-3, Dangerous Goods List and Limited Quantities Exceptions, of the Supplement to the ICAO Technical Instructions, and  
*SOR/2014-152*
    - (iii) the requirements of the ICAO Technical Instructions;
  - (b) the explosives are
    - (i) UN0030, DETONATORS, ELECTRIC for blasting,
    - (ii) UN0042, BOOSTERS without detonator,
    - (iii) UN0059, CHARGES, SHAPED without detonator,
    - (iv) UN0065, CORD, DETONATING, flexible,
    - (v) UN0081, EXPLOSIVE, BLASTING, TYPE A,
    - (vi) UN0082, EXPLOSIVE, BLASTING, TYPE B,
    - (vii) UN0083, EXPLOSIVE, BLASTING, TYPE C,
    - (viii) UN0084, EXPLOSIVE, BLASTING, TYPE D,
    - (ix) UN0241, EXPLOSIVE, BLASTING, TYPE E,
    - (x) UN0331, EXPLOSIVE, BLASTING, TYPE B,
    - (xi) UN0332, EXPLOSIVE, BLASTING TYPE E, or
    - (xii) UN0360, DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting;
  - (c) the explosives
    - (i) are not included in compatibility group A,
    - (ii) have not deteriorated or been damaged,
    - (iii) do not have an active means of initiation and are not primed for use, and



- (iv) are in a means of containment that is required for them by the packing instructions set out in Chapter 3, Class 1 — Explosives, of Part S-4, Packing Instructions, of the Supplement to the ICAO Technical Instructions; and  
*SOR/2014-152*
- (d) there are no other dangerous goods transported on board the aircraft at the same time as the explosives.
- (2) The consignor of the explosives must
  - (a) notify the air carrier, in writing, of the shipping name, UN number, primary class and compatibility group of the explosives at least 48 hours before the explosives are loaded on the aircraft;
  - (b) keep a copy of the notification to the air carrier for two years after the date the notification is sent to the air carrier; and
  - (c) notify the consignee at least 24 hours before the explosives are transported of the expected time of transport unless the consignor and the air carrier agree that the air carrier will notify the consignee of the expected time of transport when the air carrier gives the consignor written agreement to transport the explosives.
- (3) The air carrier must, at least 24 hours before transporting the explosives,
  - (a) give the consignor written agreement to transport the explosives and keep a copy of this agreement for two years after the date the notification referred to in paragraph (2)(a) is sent to the consignor; and
  - (b) notify each aerodrome operator listed on the flight plan of the intended time of departure, arrival and technical stops, if any.
- (4) The notification referred to in paragraph (2)(a) and the agreement referred to in paragraph (3)(a) are valid for any subsequent transport of the explosives for two years beginning on the date that the notification and the agreement were made unless any of the information required in them changes.  
*SOR/2002-306*

## 12.6 Handling and Transporting of Toxic and Infectious Substances

A person may handle or transport by aircraft in Canada toxic or infectious substances, other than toxic substances included in Class 6.1 and packing group I if  
*SOR/2008-34*

- (a) the person complies with
  - (i) paragraphs 12.1(1)(a) to (j), and
  - (ii) the ICAO Technical Instructions, other than section 2.8, Stowage of toxic and infectious substances, of Chapter 2, Storage and loading, of Part 7, Operator's Responsibilities; and  
*SOR/2002-306*
- (b) the dangerous goods are
  - (i) transported by cargo aircraft or passenger carrying aircraft referred to in Subpart 4 of Part VI and Subparts 1 to 4 of Part VII of the "Canadian Aviation Regulations",
  - (ii) placed in a non-permeable or sift-proof overpack that has displayed on it the markings required for an overpack by the ICAO Technical Instructions, and
  - (iii) located in an area of the aircraft that is not readily accessible to passengers.

## 12.7 Repealed *SOR/2008-34*

## 12.8 Packing Instruction Y963 *SOR/2014-152*

- (1) A person may handle, offer for transport or transport by aircraft within Canada dangerous goods that are aerosols included in Class 2.1 or 2.2, are UN3175, SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S., or are included in Class 3 and Packing Group II or III or in Class 6.1 and Packing Group III, if
  - (a) the person complies with
    - (i) paragraphs 12.1(1)(a) to (j), and

- (ii) the ICAO Technical Instructions, other than Chapter 2, Package markings, Chapter 3, Labelling, and Chapter 4, Documentation, of Part 5, Shipper's Responsibilities, and paragraphs (j) and (l) of Packing Instruction Y963 of Chapter 11, Class 9 — Miscellaneous dangerous goods, of Part 4, Packing Instructions;  
*SOR/2014-152*
  - (b) when the dangerous goods are liquid,
    - (i) the quantity for Class 3, Packing Group II, is less than or equal to
      - (A) 1 L in a metal inner means of containment, except for UN1263, PAINT or PAINT RELATED MATERIAL, in which case the quantity may be less than or equal to 5 L, or
      - (B) 500 mL in a glass, earthenware or plastic inner means of containment, and
    - (ii) the quantity for Class 3, Packing Group III, and for Class 6.1, Packing Group III, is less than or equal to
      - (A) 5 L in a metal inner means of containment, or
      - (B) 500 mL in a glass, earthenware or plastic inner means of containment; and
  - (c) when the dangerous goods are solid, the quantity is less than or equal to 5 kg in an inner means of containment.
- (2) The person who offers for transport the dangerous goods must, on each small means of containment that contains the dangerous goods,  
*SOR/2003-273*
- (a) mark the words “Air Transport, 12.8, Consumer commodity” or “Transport aérien, 12.8, produit de consommation” in letters at least 25 mm high and in a colour that contrasts with the background colour of the means of containment; and  
*SOR/2003-273*
  - (b) for liquids, except flammable liquids in a quantity less than or equal to 120 mL, display on two opposite sides of the means of containment a package orientation label illustrated in Figure 5-26 of Chapter 3, Labelling, of Part 5, Shipper's Responsibilities, of the ICAO Technical Instructions.  
*SOR/2014-152*
- (3) Despite subsection (2), the dangerous goods safety marks that are required by that subsection to be marked or displayed on a small means of containment are not required to be marked or displayed on a small means of containment that is inside another small means of containment if the other small means of containment is not opened during loading or unloading or while the dangerous goods are in transport.  
*SOR/2003-273*

## 12.9 Limited Access

### General

- (1) An air carrier may handle, offer for transport or transport by aircraft within Canada the dangerous goods referred to in subsections (2) to (12) if
  - (a) the air carrier complies with subsections (2) to (14);
  - (b) the air carrier complies with the following requirements in the ICAO Technical Instructions:
    - (i) wherever practicable, section 5.1, Information to passengers, of Chapter 5, Provisions concerning passengers and crew, of Part 7, Operator's Responsibilities,  
*SOR/2002-306*
    - (ii) section 2.4, Loading and securing of dangerous goods, and section 2.5, Damaged packages of dangerous goods, of Chapter 2, Storage and loading, of Part 7, Operator's Responsibilities,  
*SOR/2002-306*
    - (iii) section 3.1, Inspection for damage or leakage, of Chapter 3, Inspection and decontamination, of Part 7, Operator's Responsibilities,  
*SOR/2002-306*
    - (iv) when the person loading or supervising the loading of the dangerous goods on board the aircraft is not a crew member,
      - (A) section 4.1, Information to the pilot-in-command, except for packing group, number of packages and identification of the aerodrome, of Chapter 4, Provision of information, of Part 7, Operator's Responsibilities, and  
*SOR/2002-306*

- (B) in the case of dangerous goods transported by helicopter, the information required in clause (A) is provided to a person identified in the air carrier's Operations Manual rather than the pilot-in-command,
- (v) section 4.2, Information to be provided to employees, of Chapter 4, Provision of information, of Part 7, Operator's Responsibilities,  
*SOR/2014-152*
- (vi) wherever practicable, section 4.7, Cargo acceptance areas — provision of information, of Chapter 4, Provision of information, of Part 7, Operator's Responsibilities, and  
*SOR/2002-306*
- (vii) Table 7-1, "Segregation between packages", of Chapter 1, Acceptance procedures, of Part 7, Operator's Responsibilities;  
*SOR/2014-152*
- (c) the dangerous goods are
  - (i) transported by cargo aircraft or passenger carrying aircraft referred to in Subpart 4 of Part VI and Subparts 1 to 4 of Part VII of the "Canadian Aviation Regulations",
  - (ii) transported to or from a location where access is limited and there is no other practical or readily available means of transport to transport the dangerous goods, and
  - (iii) contained in a means of containment that has displayed on it the package markings and labels required by Chapter 2, Package markings, except for section 2.4.2, and required by Chapter 3, Labelling, except for section 3.2.12, of Part 5, Shipper's Responsibilities, of the ICAO Technical Instructions;  
*SOR/2014-152*
- (d) when the dangerous goods are Class 2.1, Flammable Gases, or Class 3, Flammable Liquids, smoking is prohibited on board the aircraft and the aircraft and each area or compartment of the aircraft containing the dangerous goods is ventilated to prevent the accumulation of vapours;
- (e) when the dangerous goods are transported on a passenger carrying aircraft, where practicable, they are secured in an area of the aircraft so that they are not readily accessible to the passengers;
- (f) the person who handles, offers for transport or transports the dangerous goods is trained in accordance with Part 6, Training, of these Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions; and  
*SOR/2002-306*
- (g) the person who has possession of the dangerous goods complies with Part 8 (Reporting Requirements), of these Regulations.  
*SOR/2016-95*

#### Class 3, Flammable Liquids

- (2) The requirements in subsections (3) to (6) apply to dangerous goods that are included in Class 3, Flammable Liquids, and that are
  - (a) UN1202, GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT;
  - (b) UN1203, GASOLINE or MOTOR SPIRIT or PETROL;
  - (c) UN1219, ISOPROPANOL or ISOPROPYL ALCOHOL;
  - (d) UN1223, KEROSENE;
  - (e) UN1268, PETROLEUM DISTILLATES, N.O.S., or PETROLEUM PRODUCTS, N.O.S., Packing Groups II and III only;  
or
  - (f) UN1863, FUEL, AVIATION, TURBINE ENGINE, Packing Groups II and III only.
- (3) When the Class 3, Flammable Liquids, referred to in subsection (2) are
  - (a) contained in a small means of containment that is a drum, the drum must be securely closed and marked with one of the following manufacturer's permanent markings when the drum has a capacity greater than 25 L and less than or equal to 230 L: TC, CTC, DOT, ICC 5A, 5B, 5C, 17C, 17E, TC-34, CTC-34, DOT-34, UN 1A1, UN 1B1, UN 1H1 or UN 6HA; or  
*SOR/2008-34*
  - (b) contained in a small means of containment that is not a drum, the small means of containment must be securely closed and

- (i) marked with one of the following manufacturer's permanent markings when the small means of containment has a capacity less than or equal to 25 L: UN 3A1, UN 3H1, UL or ULC,  
*SOR/2008-34*
  - (ii) marked in accordance with ASTM F 852, or
  - (iii) an unmarked steel marine fuel tank of a type that is used to supply fuel for an outboard motor.
- (4) The following means of containment may be reused to transport the Class 3, Flammable Liquids, referred to in subsection (2):
- (a) a steel drum or jerrican, if
    - (i) neither the body nor the top or bottom of the drum or jerrican is damaged by wear, scoring, dents or corrosion to the extent that the integrity of the drum or the jerrican is compromised,
    - (ii) any worn or leaking bung caps or seals are replaced,
    - (iii) the top and bottom of the drum are not bulging, and
    - (iv) sufficient ullage is left to ensure that no leakage or permanent distortion will occur as a result of expansion of the liquid caused by any temperature that may be experienced during transport;
  - (b) a plastic drum or jerrican, if
    - (i) the body of the drum or jerrican is not faded, discoloured, gouged, cracked or distorted to the extent that the integrity of the drum or jerrican is compromised,
    - (ii) the closure flange and bung of the drum show no evidence of cross-threading or thread wear,
    - (iii) any worn gaskets are replaced, and
    - (iv) when the capacity of the jerrican exceeds 25 L, it is used only for flammable liquids that are included in Packing Group III and that have a flash point greater than 37.8°C; and
  - (c) a steel marine fuel tank, if
    - (i) neither the body nor the bottom chimes of the tank is damaged by wear, scoring, dents or corrosion to the extent that the integrity of the tank is compromised,
    - (ii) any worn or leaking caps, attachments or seals are replaced, and
    - (iii) sufficient ullage is left to ensure that no leakage or permanent distortion will occur as a result of expansion of the liquid caused by any temperature that may be experienced during transport.
- (5) When the Class 3, Flammable Liquids, referred to in subsection (2) are contained in a large means of containment, that large means of containment must be
- (a) a tank, a container or an apparatus that is an integral part of the aircraft or that is attached to the aircraft in accordance with the Certificate of Airworthiness issued under the "Canadian Aviation Regulations";
  - (b) a cylindrical collapsible rubber drum that is transported in or suspended from an aircraft and that is constructed, tested, inspected and used in accordance with MIL-D-23119G; or
  - (c) a collapsible fabric tank that is transported suspended from a helicopter and that is constructed of material and seamed in accordance with MIL-T-52983G.
- (6) When the Class 3, Flammable Liquids, referred to in subsection (2) are transported
- (a) on board a passenger carrying aircraft, the total capacity of all the means of containment must be less than or equal to 230 L; and
  - (b) on board a cargo aircraft, the total capacity of each of the means of containment must be less than or equal to 230 L except for those means of containment referred to in subsection (5).

*SOR/2008-34*

Internal Combustion Engines and Vehicles

- (7) Dangerous goods that are UN3166, ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED, or ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED, or VEHICLE, FLAMMABLE GAS POWERED, or VEHICLE, FLAMMABLE LIQUID POWERED, or VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED, or VEHICLE,

FUEL CELL, FLAMMABLE LIQUID POWERED, or ENGINE, FUEL CELL, FLAMMABLE GAS POWERED, or ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED, must be handled, offered for transport or transported in accordance with the following requirements in the ICAO Technical Instructions:

- (a) Special Provision A87 of Chapter 3, Special provisions, of Part 3, Dangerous Goods List, Special Provisions and Limited and Excepted Quantities;
- (b) Packing Instruction 950 of Chapter 11, Class 9 — Miscellaneous dangerous goods, of Part 4, Packing Instructions, in the case of
  - (i) UN3166, ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED,
  - (ii) UN3166, VEHICLE, FLAMMABLE LIQUID POWERED,
  - (iii) UN3166, VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, or
  - (iv) UN3166, ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED; and
- (c) Packing Instruction 951 of Chapter 11, Class 9 — Miscellaneous dangerous goods, of Part 4, Packing Instructions, in the case of
  - (i) UN3166, ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED,
  - (ii) UN3166, VEHICLE, FLAMMABLE GAS POWERED,
  - (iii) UN3166, VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED, or
  - (iv) UN3166, ENGINE, FUEL CELL, FLAMMABLE GAS POWERED.

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#### Fire Extinguishers

- (8) When dangerous goods are UN1044, FIRE EXTINGUISHERS, Class 2.2, they must
  - (a) be in compliance with section 5.10 of Part 5, Means of Containment;
  - (b) have a capacity less than or equal to 18 L when they are transported on board a passenger carrying aircraft; and  
*SOR/2008-34*
  - (c) be packed in accordance with Packing Instruction 213 of Chapter 4, Class 2 – Gases, of Part 4, Packing Instructions, of the ICAO Technical Instructions.  
*SOR/2008-34*

#### Gases

- (9) The following dangerous goods that are included in Class 2.1, Flammable Gases, must be in a means of containment set out in subsection (10):
  - (a) UN1011, BUTANE;
  - (b) UN1012, BUTYLENE;
  - (c) UN1055, ISOBUTYLENE;
  - (d) UN1075, LIQUEFIED PETROLEUM GASES;
  - (e) UN1077, PROPYLENE;
  - (f) UN1969, ISOBUTANE; or
  - (g) UN1978, PROPANE.
- (10) The dangerous goods referred to in subsection (9) must be contained in
  - (a) a means of containment that is marked TC-51, DOT-51 or CTC-51 and that is in standard with CSA B622 and Appendices A and B of CSA B620; or
  - (b) a cylinder that is in compliance with section 5.10 of Part 5, Means of Containment, and
    - (i) the cylinder has a capacity less than or equal to 100 L,  
*SOR/2008-34*

- (ii) if the dangerous goods are transported in cylinders on board a passenger carrying aircraft, the total capacity of all the cylinders must be less than or equal to 120 L, and  
*SOR/2008-34*
- (iii) the cylinder is secured in an upright position or in as near an upright position as possible to prevent movement during transport.

#### Batteries

- (11) Dangerous goods that are UN2794, BATTERIES, WET, FILLED WITH ACID, Class 8, UN2795, BATTERIES, WET, FILLED WITH ALKALI, Class 8, or UN2800, BATTERIES, WET, NON-SPILLABLE, Class 8, must
  - (a) be transported in accordance with
    - (i) the third sentence of Special Provision A123 of Chapter 3, Special Provisions, of Part 3, Dangerous Goods List and Limited Quantities Exceptions, of the ICAO Technical Instructions, and  
*SOR/2003-400*
    - (ii) the following packing instructions of Chapter 10, Class 8 — Corrosives, of Part 4, Packing Instructions, of the ICAO Technical Instructions, except that, when the aircraft is not a pressurized aircraft, section 1.1.6 of Chapter 1, General packing requirements, of Part 4, Packing Instructions, of the ICAO Technical Instructions does not apply:  
*SOR/2002-306*
      - (A) for batteries with the UN number UN2794 or UN2795, Packing Instruction 870, and  
*SOR/2014-152*
      - (B) for batteries with the UN number UN2800, Packing Instruction 872; and  
*SOR/2014-152*
  - (b) if the batteries are transported on board a passenger carrying aircraft, have a gross mass less than or equal to 120 kg.

#### Sodium Chlorite and Hypochlorite Solution

- (12) When dangerous goods are UN1496, SODIUM CHLORITE, Class 5.1, or UN1791, HYPOCHLORITE SOLUTION, Class 8,
  - (a) the available chlorine must be 7 per cent or less;
  - (b) the quantity of the dangerous goods in an inner means of containment must be less than or equal to 5 L or 5 kg and, in an outer means of containment must be less than or equal to 20 L or 20 kg;
  - (c) the dangerous goods must be placed in a leakproof inner means of containment that is a combination packaging, as defined in Chapter 3, General information, of Part 1, General, of the ICAO Technical Instructions; and  
*SOR/2002-306*
  - (d) the inner means of containment must be placed in an outer means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.  
*SOR/2008-34*

#### Pilot-in-command Responsibilities

- (13) An air carrier must ensure that
  - (a) the pilot-in-command of an aircraft, other than a helicopter, transporting dangerous goods
    - (i) briefs flight attendants, if any, on the nature and location of the dangerous goods that are in any compartment to which the flight attendants have access, and
    - (ii) completes and signs a manifest, journey log or flight record, or any other type of document designated for this purpose in the Operator's Manual, that includes the shipping name, UN number, class and quantity of dangerous goods transported that day;
  - (b) at the end of each day, the pilot-in-command of a helicopter transporting dangerous goods completes and signs a manifest, journey log or flight record or any other type of document designated for this purpose in the Operator's Manual, that includes the words "Dangerous Goods Transported" or "Marchandises dangereuses transportées";
  - (c) the air carrier keeps the documents referred to in paragraphs (a) and (b) for 12 months after the date on which the dangerous goods are no longer in transport; and

- (d) when an in-flight emergency occurs and circumstances permit, the pilot-in-command
  - (i) complies with section 4.3, Information to be provided by the pilot-in-command in case of in-flight emergency, of Chapter 4, Provision of information, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions, or *SOR/2014-152*
  - (ii) for an external load of dangerous goods suspended from a helicopter, notifies the appropriate air traffic services unit that dangerous goods are in the external load.

### Records

#### (14) An air carrier must

- (a) if the consignor, the person who accepts the dangerous goods or the person who loads the aircraft is not an employee of the air carrier, keep the following information for 12 months after the date on which the dangerous goods are no longer in transport:
  - (i) the name and address of each consignor of dangerous goods, and
  - (ii) the name and address of the person who
    - (A) accepts each consignment of dangerous goods or directly supervises the acceptance of the dangerous goods, or
    - (B) loads and secures the dangerous goods or directly supervises the loading and securing of the dangerous goods;
- (b) keep a copy of the information referred to in clause (1)(b)(iv)(A) for 12 months after the date on which the dangerous goods are no longer in transport; and
- (c) for transport by helicopter, ensure that the following information is prepared before the dangerous goods are transported and is kept for 12 months after the date on which the dangerous goods are no longer in transport:
  - (i) the name and address of each consignor of dangerous goods,
  - (ii) the approximate date of transport,
  - (iii) the locations to and from which the dangerous goods are to be transported,
  - (iv) the shipping name, the UN number, the class and the quantity of dangerous goods to be transported, and
  - (v) the name of the air carrier's employee who prepares the information.

- (15) An air carrier must produce a record, notice or report required by subsection (1) within 15 days after the day on which a written request is received from an inspector.

#### 12.10 Private Aircraft

A person may handle or transport dangerous goods within Canada by small aircraft or helicopter registered as private aircraft under sections 202.16 and 202.17 of the "Canadian Aviation Regulations" if the dangerous goods

- (a) are intended for non-commercial recreational use; and
- (b) are not forbidden for transport by Schedule 1 or Schedule 3 to these Regulations or by the ICAO Technical Instructions.

#### 12.11 Geological Core Samples

A person may handle, offer for transport or transport by aircraft within Canada dangerous goods that are contained in geological core samples less than or equal to 100 mm in diameter if

- (a) when the consignor is not the air carrier, the consignor notifies the air carrier of the presence of the core samples before offering them for transport;
- (b) the core samples are transported in wooden core sample boxes that are wrapped in a sealed plastic or polyethylene bag or in a means of containment that is equally leak-proof;

- (c) the core samples as well as the means of containment are secured to prevent movement during transport; and
- (d) where the core samples contain radioactive material, they are contained in a means of containment in accordance with the “Packaging and Transport of Nuclear Substances Regulations”.

## 12.12 Aerial Work

- (1) A person may handle, offer for transport or transport dangerous goods by aircraft within Canada if the dangerous goods are being used at the location where the following aerial work takes place:
  - (a) active fire suppression;
  - (b) aerial cloud seeding;
  - (c) aerial drip torching;
  - (d) agriculture;
  - (e) avalanche control;
  - (f) forestry;
  - (g) horticulture;
  - (h) hydrographic or seismographic work; or
  - (i) pollution control.
- (2) The dangerous goods must be contained in a means of containment that is
  - (a) a tank, a container or an apparatus that is an integral part of the aircraft or that is attached to the aircraft in accordance with the Certificate of Airworthiness issued under the “Canadian Aviation Regulations”;
  - (b) a cylindrical collapsible rubber drum that is transported in or suspended from an aircraft and that is constructed, tested, inspected and used in accordance with MIL-D-23119G;
  - (c) a collapsible fabric tank that is transported suspended from a helicopter and that is constructed of material and seamed in accordance with MIL-T-52983G; or
  - (d) a small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.  
*SOR/2008-34*
- (3) The air carrier must ensure that
  - (a) the person who loads and secures the dangerous goods on board the aircraft is trained, or works under the direct supervision of a person who is trained, in accordance with Part 6, Training, of these Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions;  
*SOR/2002-306*
  - (b) if the dangerous goods are handled or transported by a person other than an employee of the air carrier, that person is trained in accordance with Part 6, Training, of these Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions;  
*SOR/2002-306*
  - (c) the air carrier complies with Part 8 (Reporting Requirements); of these Regulations;  
*SOR/2016-95*
  - (d) if the pilot-in-command of the aircraft does not load or directly supervise the loading of the dangerous goods, the person who loads and secures the dangerous goods gives the pilot-in-command, in writing, the following information for each of the dangerous goods:
    - (i) its shipping name, UN number and class, and
    - (ii) the gross mass of the dangerous goods and, in the case of explosives, the net explosives quantity;
  - (e) smoking is prohibited on board the aircraft and each area or compartment of the aircraft containing dangerous goods is ventilated to prevent the accumulation of vapour;
  - (f) when an in-flight emergency occurs and circumstances permit, the pilot-in-command complies with section 4.3, Information to be provided by the pilot-in-command in case of in-flight emergency, of Chapter 4, Provision of information, of Part 7,



Operator's Responsibilities, of the ICAO Technical Instructions; and  
*SOR/2014-152*

- (g) the person who loads and secures or directly supervises the loading and securing of dangerous goods on board the aircraft
  - (i) complies with section 3.1, Inspection for damage or leakage, of Chapter 3, Inspection and decontamination, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions, and  
*SOR/2002-306*
  - (ii) segregates the means of containment that contain dangerous goods that could react dangerously with one another in case of an accidental release, in accordance with Table 7-1, "Segregation between packages", of Chapter 1, Acceptance procedures, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions.  
*SOR/2014-152*

### 12.13 Measuring Instruments

A person may handle or transport by aircraft within Canada a measuring instrument that contains dangerous goods if

- (a) the person who is responsible for the measuring instrument
  - (i) ensures that the measuring instrument or its means of containment has displayed on it labels in accordance with Chapter 3, Labelling, of Part 5, Shipper's Responsibilities, of the ICAO Technical Instructions,  
*SOR/2002-306*
  - (ii) before transporting the measuring instrument on the aircraft, has the written agreement of the air carrier to use or transport the measuring instrument on board the aircraft, and
  - (iii) is trained in accordance with Part 6, Training, of these Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions and complies with all laws applicable to the measuring instrument;  
*SOR/2002-306*
- (b) the measuring instrument is placed or used in a location in the aircraft that is known to the pilot-in-command and the flight crew; and
- (c) when the measuring instrument contains radioactive materials,
  - (i) the radiation level at 100 mm from any point of the external surface of the instrument is less than or equal to 100 µSv/h (10 millirems per hour), and
  - (ii) the activity of the measuring instrument does not exceed the applicable exception limit set out in the column entitled "Item limits" in Table 2-15, "Activity limits for excepted packages", of Chapter 7, Class 7 — Radioactive material, of Part 2, Classification of Dangerous Goods, of the ICAO Technical Instructions.  
*SOR/2014-152*

### 12.14 Medical Aid

*Section 1.1.3 of Chapter 1, Scope and applicability, of Part 1, General, of the ICAO Technical Instructions states that the Instructions do not apply to dangerous goods carried on board an aircraft when the dangerous goods are to provide, during flight, medical aid to a patient. This section is intended to cover the transport of dangerous goods before or after a person requiring the dangerous goods for medical aid during flight is on board the aircraft*  
*SOR/2002-306*

- (1) A person may handle, offer for transport or transport by aircraft within Canada dangerous goods, other than Class 2, Gases, if
  - (a) the dangerous goods will be used or part of the dangerous goods have been used for a person who will require or who has required medical aid during flight;
  - (b) the transport of the dangerous goods is not forbidden by Schedule 1 or Schedule 3 of these Regulations or the ICAO Technical Instructions;
  - (c) before the dangerous goods are loaded, the person who offers them for transport receives the agreement of the air carrier to transport the dangerous goods on board the aircraft;
  - (d) the air carrier
    - (i) directly supervises the loading and securing of the dangerous goods on board the aircraft so that they do not move during transport,

- (ii) complies with section 3.1, Inspection for damage or leakage, of Chapter 3, Inspection and decontamination, of Part 7, Operator's Responsibilities, of the ICAO Technical Instructions, and  
*SOR/2002-306*
  - (iii) provides to the pilot-in-command, in writing, the shipping name, the UN number and the class of the dangerous goods and their location on board the aircraft;
  - (e) **repealed** *SOR/2002-306*
  - (f) in the event of a change of aircraft or flight crew, the pilot-in-command communicates the information required by subparagraph (d)(iii) to the next pilot-in-command;
  - (g) the air carrier's employees are trained, or work under the direct supervision of a person who is trained, in accordance with Part 6, Training, of these Regulations and Chapter 4, Training, of Part 1, General, of the ICAO Technical Instructions; and  
*SOR/2002-306*
  - (h) the air carrier complies with Part 8 (Reporting Requirements); of these Regulations.  
*SOR/2016-95*
- (2) The air carrier and the person who offers the dangerous goods for transport must ensure that
- (a) the dangerous goods are contained in a means of containment that is designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety; and  
*SOR/2008-34*
  - (b) the means of containment has displayed on it the package markings and labels required by Chapter 2, Package markings, and Chapter 3, Labelling, of Part 5, Shipper's Responsibilities, of the ICAO Technical Instructions.  
*SOR/2002-306*
- (3) A person may handle, offer for transport or transport by aircraft within Canada UN1072, OXYGEN, COMPRESSED, if
- (a) the air carrier and the person who offers the dangerous goods for transport comply with the requirements of subsection (1) and paragraph (2)(b);
  - (b) the dangerous goods are in a cylinder that is in compliance with section 5.10 of Part 5, Means of Containment, of these Regulations;
  - (c) each cylinder contains a quantity of UN1072, OXYGEN, COMPRESSED, that is less than or equal to 850 L or 30 ft<sup>3</sup>;
  - (d) the number of cylinders containing UN1072, OXYGEN, COMPRESSED, does not exceed 6 owned by the air carrier and one additional cylinder for each passenger who needs the oxygen at destination; and
  - (e) the pilot-in-command is advised of the number of cylinders loaded on board the aircraft;
  - (f) **Repealed** *SOR/2014-152*

**12.15 Repealed** *SOR/2008-34*

**12.16 Repealed** *SOR/2008-34*

**12.17 Flight Deck Loading Restrictions**

A person may handle or transport within Canada, by an aircraft that does not have a Class B, Class C or Class D cargo compartment, dangerous goods other than those included in Class 4.3, Water Reactive Substances, if

- (a) the person complies with
  - (i) paragraphs 12.1(1)(a) to (j), and
  - (ii) the ICAO Technical Instructions, other than section 2.1, Loading restrictions on flight deck and for passenger aircraft, of Chapter 2, Storage and loading, of Part 7, Operator's Responsibilities;  
*SOR/2002-306*
- (b) a certificate was issued for the aircraft under Subpart 4 of Part VI or Subpart 3 or 4 of Part VII of the "Canadian Aviation Regulations";
- (c) transport of the dangerous goods is not forbidden by Schedule 1 or Schedule 3 of these Regulations or the ICAO Technical Instructions;

- (d) transport of the dangerous goods is not restricted by the ICAO Technical Instructions to cargo aircraft only; and
- (e) the dangerous goods are loaded and transported in a compartment that is accessible during flight so that the dangerous goods and any other cargo can be readily reached by a crew member using, if necessary, a hand-held fire extinguisher.