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INDUSTRIAL SERVICES USA, INC.

USDOT PHMSA and TRANSPORT CANADA RECIPROCITY AGREEMENT

For more than 20 years, negotiations between the US DOT PHMSA and Transport Canada have been conducted to attain a reciprocal agreement between these two agencies to permit the transportation of hazardous materials in gas cylinders to travel freely between the US and Canada regardless of the specification marking.

Finally, after a postponement in January by the DOT and final acceptance by Transport Canada in July, reciprocity as regards specification and UN ISO cylinders has been successfully legislated by both agencies and is now in effect. We have had several discussions with the representatives of both agencies to understand the effects these changes have upon cylinder manufacturing, as they were still working out specific details until just recently.

The DOT regulations affected by legislation are 49CFR §171.12(a) North American Shipments, 49CFR §171.22 Authorization and conditions for the use of international standards and regulations, and 49CFR §171.23(a) Requirements for specific materials and packagings transported under the ICAO Technical Instructions, IMDG Code, Transport Canada TDG Regulations, or the IAEA Regulations.

The Transport Canada regulations affected by legislation are stated in TDG Part 5.10 (2) Means of Containment for Class 2, Gases. Sometime during March 2018, full incorporation of the TDG rules will be made into the respective CSA documents B339, B340, B341 and B342, as appropriate. In the meantime, the TDG regulations referenced previously shall be in effect.

These rulemaking changes now allow cylinders registered and marked with approved DOT specifications and UNISO standards (for example DOT-3AA, DOT-4BA, ISO 9809-1) to be filled, transported and used in Canada, or conversely, registered TC specification cylinders or approved UNISO standards (for example TC-3ALM, TC-4BWM, TC-4LM, ISO 7866) to be filled, transported and used in the US.

Please note that These rule changes do not extend to cylinders made under special permits (SP), exemption (E) or Permit for Equivalent Level of Safety (SU), including TC-3CCM cylinders, as PHMSA and TC have not been able to fully agree on the status of these containers as to registration and regulation.

Therefore, a cylinder manufacturer may choose to maintain or suspend either their TC manufacturing registration or DOT manufacturing registration, as either registration is deemed sufficient. However, composite cylinder manufacturers (except for ISO 11119-X cylinders) must maintain their DOT and/or TC approvals in order to comply with current regulations.



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If a manufacturer chooses to maintain both regulatory approvals and design registrations, they will still need to continue to meet all requirements set forth by that respective regulatory agency. Periodic auditing for maintaining approvals and registrations, as currently being discussed by these regulators, may be conducted jointly at the same time at the facility, or at approximately alternating three-year intervals; this issue is still to be determined.

Each regulatory authority shall independently audit all new manufacturer applications for approvals or registrations.

The attachments are the above referenced regulations.

Steven T Hutchinson
Director of International Services
December 1, 2017 Amended 9/30/19

Attachments: 49CFR§171.12
49CFR§171.22
49CFR§171.23
TDG 5.10 Means of Containment

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Title 49: Transportation

[PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS](#)[Subpart A—Applicability, General Requirements, and North American Shipments](#)**§171.12 North American Shipments.**

(a) *Requirements for the use of the Transport Canada TDG Regulations.* (1) A hazardous material transported from Canada to the United States, from the United States to Canada, or transiting the United States to Canada or a foreign destination may be offered for transportation or transported by motor carrier and rail in accordance with the Transport Canada TDG Regulations (IBR, *see* §171.7) or an equivalency certificate (permit for equivalent level of safety) issued under the TDG Regulations, as authorized in §171.22, provided the requirements in §§171.22 and 171.23, as applicable, and this section are met. In addition, a cylinder, MEGC, cargo tank motor vehicle, portable tank or rail tank car authorized by the Transport Canada TDG Regulations may be used for transportation to, from, or within the United States provided the cylinder, MEGC, cargo tank motor vehicle, portable tank or rail tank car conforms to the applicable requirements of this section. Except as otherwise provided in this subpart and subpart C of this part, the requirements in parts 172, 173, and 178 of this subchapter do not apply for a material transported in accordance with the Transport Canada TDG Regulations.

(2) *General packaging requirements.* When the provisions of this subchapter require a DOT specification or UN standard packaging to be used for transporting a hazardous material, a packaging authorized by the Transport Canada TDG Regulations may be used, subject to the limitations of this part, and only if it is equivalent to the corresponding DOT specification or UN packaging (*see* §173.24(d)(2) of this subchapter) authorized by this subchapter.

(3) *Bulk packagings.* A portable tank, cargo tank motor vehicle or rail tank car equivalent to a corresponding DOT specification and conforming to and authorized by the Transport Canada TDG Regulations may be used provided—

(i) An equivalent type of packaging is authorized for the hazardous material according to the §172.101 table of this subchapter;

(ii) The portable tank, cargo tank motor vehicle or rail tank car conforms to the requirements of the applicable part 173 bulk packaging section specified in the §172.101 table for the material to be transported;

(iii) The portable tank, cargo tank motor vehicle or rail tank car conforms to the requirements of all assigned bulk packaging special provisions (B codes, and T and TP codes) in §172.102 of this subchapter; and

(iv) The bulk packaging conforms to all applicable requirements of §§173.31, 173.32, 173.33 and 173.35 of this subchapter, and parts 177 and 180 of this subchapter. The periodic retests and inspections required by §§173.31, 173.32 and 173.33 of this subchapter may be performed in accordance with part 180 of this subchapter or in accordance with the requirements of the TDG Regulations provided that the intervals prescribed in part 180 of this subchapter are met.

(v) Rail tank cars must conform to the requirements of Canadian General Standards Board standard 43.147 (IBR, *see* §171.7).

(4) *Cylinders and MEGCs.* When the provisions of this subchapter require that a DOT specification or a UN pressure receptacle must be used for a hazardous material, a packaging authorized by the Transport Canada TDG Regulations may be used only if it corresponds to the DOT specification or UN standard authorized by this subchapter. Unless otherwise excepted in this subchapter, a cylinder (including a UN pressure receptacle) or MEGC may not be transported unless—

(i) The packaging is a UN pressure receptacle or MEGC marked with the letters “CAN” for Canada as a country of manufacture or a country of approval or is a cylinder that was manufactured, inspected and tested in accordance with a DOT specification or a UN standard prescribed in part 178 of this subchapter, except that cylinders not conforming to these requirements must meet the requirements in §171.23. Each cylinder must conform to the applicable requirements in part 173 of this subchapter for the hazardous material involved.

(ii) A Canadian Railway Commission (CRC), Board of Transport Commissioners for Canada (BTC), Canadian Transport Commission (CTC) or Transport Canada (TC) specification cylinder manufactured, originally marked, and approved in accordance with the TDG Regulations, and in full conformance with the TDG Regulations is authorized for transportation to, from or within the United States provided:

(A) The CRC, BTC, CTC or TC specification cylinder corresponds with a DOT specification cylinder and the markings are the same as those specified in this subchapter, except that the original markings were “CRC”, “BTC”, “CTC”, or “TC”;

(B) The cylinder has been requalified under a program authorized by the TDG Regulations or subpart I of part 107 of this chapter;

(C) When the regulations authorize a cylinder for a specific hazardous material with a specification marking prefix of “DOT,” a cylinder marked “CRC”, “BTC”, “CTC”, or “TC” otherwise bearing the same markings required of the specified “DOT” cylinder may be used; and

(D) Transport of the cylinder and the material it contains is in all other respects in conformance with the requirements of this subchapter (e.g. valve protection, filling requirements, operational requirements, etc.).

(iii) Authorized CRC, BTC, CTC or TC specification cylinders that correspond with a DOT specification cylinder are as follows:

TC	DOT (some or all of these specifications may instead be marked with the prefix ICC)	CTC (some or all of these specifications may instead be marked with the prefix BTC or CRC)
TC-3AM	DOT-3A [ICC-3]	CTC-3A
TC-3AAM	DOT-3AA	CTC-3AA
TC-3ANM	DOT-3BN	CTC-3BN
TC-3EM	DOT-3E	CTC-3E
TC-3HTM	DOT-3HT	CTC-3HT
TC-3ALM	DOT-3AL	CTC-3AL
	DOT-3B	CTC-3B
TC-3AXM	DOT-3AX	CTC-3AX
TC-3AAXM	DOT-3AAX	CTC-3AAX
	DOT-3A480X	CTC-3A480X
TC-3TM	DOT-3T	
TC-4AAM33	DOT-4AA480	CTC-4AA480
TC-4BM	DOT-4B	CTC-4B
TC-4BM17ET	DOT-4B240ET	CTC-4B240ET
TC-4BAM	DOT-4BA	CTC-4BA
TC-4BWM	DOT-4BW	CTC-4BW
TC-4DM	DOT-4D	CTC-4D
TC-4DAM	DOT-4DA	CTC-4DA
TC-4DSM	DOT-4DS	CTC-4DS
TC-4EM	DOT-4E	CTC-4E
TC-39M	DOT-39	CTC-39
TC-4LM	DOT-4L	CTC-4L
	DOT-8	CTC-8
	DOT-8AL	CTC-8AL

(5) *Class 1 (explosive) materials.* When transporting Class 1 (explosive) material, rail and motor carriers must comply with 49 CFR 1572.9 and 1572.11 to the extent the requirements apply.

(6) *Lithium metal cells and batteries.* Lithium metal cells and batteries (UN3090) are forbidden for transport aboard passenger-carrying aircraft. The outside of each package that contains lithium cells or batteries meeting the conditions for exception in §173.185(c) of this subchapter and transported in accordance with the Transport Canada TDG Regulations must be marked in accordance with §173.185(c)(1)(iii) or (c)(1)(iv) as appropriate.

(b) *Shipments to or from Mexico.* Unless otherwise excepted, hazardous materials shipments from Mexico to the United States or from the United States to Mexico must conform to all applicable requirements of this subchapter. When a hazardous material that is a material poisonous by inhalation (see §171.8) is transported by highway or rail from Mexico to the United States, or from the United States to Mexico, the following requirements apply:

(1) The shipping description must include the words “Toxic Inhalation Hazard” or “Poison-Inhalation Hazard” or “Inhalation Hazard”, as required in §172.203(m) of this subchapter.

(2) The material must be packaged in accordance with requirements of this subchapter.

(3) The package must be marked in accordance with §172.313 of this subchapter.

(4) Except as provided in paragraph (e)(5) of this section, the package must be labeled or placarded POISON GAS or POISON INHALATION HAZARD, as appropriate, in accordance with subparts E and F of this subchapter.

(5) A label or placard that conforms to the UN Recommendations (IBR, see §171.7) specifications for a “Division 2.3” or “Division 6.1” label or placard may be substituted for the POISON GAS or POISON INHALATION HAZARD label or placard required by §§172.400(a) and 172.504(e) of this subchapter on a package transported in a closed transport vehicle or freight container. The transport vehicle or freight container must be marked with identification numbers for the material, regardless of the total quantity contained in the transport vehicle or freight container, in the manner specified in §172.313(c) of this subchapter and placarded as required by subpart F of this subchapter.

[Amdt. 171-111, 55 FR 52472, Dec. 21, 1990]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §171.12, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

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Title 49: Transportation

[PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS](#)

[Subpart C—Authorization and Requirements for the Use of International Transport Standards and Regulations](#)

§171.22 Authorization and conditions for the use of international standards and regulations.

(a) *Authorized international standards and regulations.* This subpart authorizes, with certain conditions and limitations, the offering for transportation and the transportation in commerce of hazardous materials in accordance with the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), the International Maritime Dangerous Goods Code (IMDG Code), Transport Canada's Transportation of Dangerous Goods Regulations (Transport Canada TDG Regulations), and the International Atomic Energy Agency Regulations for the Safe Transport of Radioactive Material (IAEA Regulations) (IBR, see §171.7).

(b) *Limitations on the use of international standards and regulations.* A hazardous material that is offered for transportation or transported in accordance with the international standards and regulations authorized in paragraph (a) of this section—

(1) Is subject to the requirements of the applicable international standard or regulation and must be offered for transportation or transported in conformance with the applicable standard or regulation; and

(2) Must conform to all applicable requirements of this subpart.

(c) *Materials excepted from regulation under international standards and regulations.* A material designated as a hazardous material under this subchapter, but excepted from or not subject to the international transport standards and regulations authorized in paragraph (a) of this section (e.g., paragraph 1.16 of the Transport Canada TDG Regulations excepts from regulation quantities of hazardous materials less than or equal to 500 kg gross transported by rail) must be transported in accordance with all applicable requirements of this subchapter.

(d) *Materials not regulated under this subchapter.* Materials not designated as hazardous materials under this subchapter but regulated by an international transport standard or regulation authorized in paragraph (a) of this section may be offered for transportation and transported in the United States in full compliance (i.e., packaged, marked, labeled, classed, described, stowed, segregated, secured) with the applicable international transport standard or regulation.

(e) *Forbidden materials.* No person may offer for transportation or transport a hazardous material that is a forbidden material or package as designated in—

(1) Section 173.21 of this subchapter;

(2) Column (3) of the §172.101 Table of this subchapter;

(3) Column (9A) of the §172.101 Table of this subchapter when offered for transportation or transported on passenger aircraft or passenger railcar; or

(4) Column (9B) of the §172.101 Table of this subchapter when offered for transportation or transported by cargo aircraft.

(f) *Complete information and certification.* (1) Except for shipments into the United States from Canada conforming to §171.12, each person importing a hazardous material into the United States must provide the shipper, and the forwarding agent at the place of entry into the United States, timely and complete written information as to the requirements of this subchapter applicable to the particular shipment.

(2) The shipper, directly or through the forwarding agent at the place of entry, must provide the initial U.S. carrier with the shipper's certification required by §172.204 of this subchapter, unless the shipment is otherwise excepted from the certification requirement. Except for shipments for which the certification requirement does not apply, a carrier may not accept a hazardous material for transportation unless provided a shipper's certification.

(3) All shipping paper information and package markings required in accordance with this subchapter must be in English. The use of shipping papers and a package marked with both English and a language other than English, in order to dually comply with this subchapter and the regulations of a foreign entity, is permitted under this subchapter.

(4) Each person who provides for transportation or receives for transportation (see §§174.24, 175.30, 176.24 and 177.817 of this subchapter) a shipping paper must retain a copy of the shipping paper or an electronic image thereof that is accessible at or through its principal place of business in accordance with §172.201(e) of this subchapter.

(g) *Additional requirements for the use of international standards and regulations.* All shipments offered for transportation or transported in the United States in accordance with this subpart must conform to the following requirements of this subchapter, as applicable:

- (1) The emergency response information requirements in subpart G of part 172 of this subchapter;
- (2) The training requirements in subpart H of part 172 of this subchapter, including function-specific training in the use of the international transport standards and regulations authorized in paragraph (a) of this section, as applicable;
- (3) The security requirements in subpart I of part 172 of this subchapter;
- (4) The incident reporting requirements in §§171.15 and 171.16 of this part for incidents occurring within the jurisdiction of the United States including on board vessels in the navigable waters of the United States and aboard aircraft of United States registry anywhere in air commerce;
- (5) For export shipments, the general packaging requirements in §§173.24 and 173.24a of this subchapter;
- (6) For export shipments, the requirements for the reuse, reconditioning, and remanufacture of packagings in §173.28 of this subchapter; and
- (7) The registration requirements in subpart G of part 107 of this chapter.

[72 FR 25172, May 3, 2007, as amended at 72 FR 55091 Sept. 28, 2007; 74 FR 53186, Oct. 16, 2009; 76 FR 56311, Sept. 13, 2011; 80 FR 72920, Nov. 23, 2015; 81 FR 35513, June 2, 2016]

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Title 49: Transportation

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

Subpart C—Authorization and Requirements for the Use of International Transport Standards and Regulations

§171.23 Requirements for specific materials and packagings transported under the ICAO Technical Instructions, IMDG Code, Transport Canada TDG Regulations, or the IAEA Regulations.

All shipments offered for transportation or transported in the United States under the ICAO Technical Instructions, IMDG Code, Transport Canada TDG Regulations, or the IAEA Regulations (IBR, see §171.7) must conform to the requirements of this section, as applicable.

(a) *Conditions and requirements for cylinders.* (1) Except as provided in this paragraph (a), a filled cylinder (pressure receptacle) manufactured to other than a DOT specification or a UN standard in accordance with part 178 of this subchapter, a DOT exemption or special permit cylinder, a TC, CTC, CRC, or BTC cylinder authorized under §171.12, or a cylinder used as a fire extinguisher in conformance with §173.309(a) of this subchapter, may not be transported to, from, or within the United States.

(2) Cylinders (including UN pressure receptacles) transported to, from, or within the United States must conform to the applicable requirements of this subchapter. Unless otherwise excepted in this subchapter, a cylinder must not be transported unless—

(i) The cylinder is manufactured, inspected and tested in accordance with a DOT specification or a UN standard prescribed in part 178 of this subchapter, or a TC, CTC, CRC, or BTC specification set out in the Transport Canada TDG Regulations (IBR, see §171.7), except that cylinders not conforming to these requirements must meet the requirements in paragraph (a)(3), (4), or (5) of this section;

(ii) The cylinder is equipped with a pressure relief device in accordance with §173.301(f) of this subchapter and conforms to the applicable requirements in part 173 of this subchapter for the hazardous material involved;

(iii) The openings on an aluminum cylinder in oxygen service conform to the requirements of this paragraph, except when the cylinder is used for aircraft parts or used aboard an aircraft in accordance with the applicable airworthiness requirements and operating regulations. An aluminum DOT specification cylinder must have an opening configured with straight (parallel) threads. A UN pressure receptacle may have straight (parallel) or tapered threads provided the UN pressure receptacle is marked with the thread type, e.g. “17E, 25E, 18P, or 25P” and fitted with the properly marked valve; and

(iv) A UN pressure receptacle is marked with “USA” as a country of approval in conformance with §§178.69 and 178.70 of this subchapter, or “CAN” for Canada.

(3) *Importation of cylinders for discharge within a single port area.* A cylinder manufactured to other than a DOT specification or UN standard in accordance with part 178 of this subchapter, or a TC, CTC, BTC, or CRC specification cylinder set out in the Transport Canada TDG Regulations (IBR, see §171.7), and certified as being in conformance with the transportation regulations of another country may be authorized, upon written request to and approval by the Associate Administrator, for transportation within a single port area, provided—

(i) The cylinder is transported in a closed freight container;

(ii) The cylinder is certified by the importer to provide a level of safety at least equivalent to that required by the regulations in this subchapter for a comparable DOT, TC, CTC, BTC, or CRC specification or UN cylinder; and

(iii) The cylinder is not refilled for export unless in compliance with paragraph (a)(4) of this section.

(4) *Filling of cylinders for export or for use on board a vessel.* A cylinder not manufactured, inspected, tested and marked in accordance with part 178 of this subchapter, or a cylinder manufactured to other than a UN standard, DOT specification, exemption or special permit, or other than a TC, CTC, BTC, or CRC specification, may be filled with a gas in the United States and offered for transportation and transported for export or alternatively, for use on board a vessel, if the following conditions are met:

(i) The cylinder has been requalified and marked with the month and year of requalification in accordance with subpart C of part 180 of this subchapter, or has been requalified as authorized by the Associate Administrator;

(ii) In addition to other requirements of this subchapter, the maximum filling density, service pressure, and pressure relief device for each cylinder conform to the requirements of this part for the gas involved; and

(iii) The bill of lading or other shipping paper identifies the cylinder and includes the following certification: "This cylinder has (These cylinders have) been qualified, as required, and filled in accordance with the DOT requirements for export."

(5) *Cylinders not equipped with pressure relief devices.* A DOT specification or a UN cylinder manufactured, inspected, tested and marked in accordance with part 178 of this subchapter and otherwise conforms to the requirements of part 173 of this subchapter for the gas involved, except that the cylinder is not equipped with a pressure relief device may be filled with a gas and offered for transportation and transported for export if the following conditions are met:

(i) Each DOT specification cylinder or UN pressure receptacle must be plainly and durably marked "For Export Only";

(ii) The shipping paper must carry the following certification: "This cylinder has (These cylinders have) been retested and refilled in accordance with the DOT requirements for export."; and

(iii) The emergency response information provided with the shipment and available from the emergency response telephone contact person must indicate that the pressure receptacles are not fitted with pressure relief devices and provide appropriate guidance for exposure to fire.

(b) *Conditions and requirements specific to certain materials—(1) Aerosols.* Except for a limited quantity of a compressed gas in a container of not more than 4 fluid ounces capacity meeting the requirements in §173.306(a)(1) of this subchapter, the proper shipping name "Aerosol," UN1950, may be used only for a non-refillable receptacle containing a gas compressed, liquefied, or dissolved under pressure the sole purpose of which is to expel a nonpoisonous (other than Division 6.1, Packing Group III material) liquid, paste, or powder and fitted with a self-closing release device (see §171.8). In addition, an aerosol must be in a metal packaging when the packaging exceeds 7.22 cubic inches.

(2) *Safety devices for vehicles, vessels or aircraft, e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices.* For each safety device, the shipping paper description must conform to the requirements in §173.166(c) of this subchapter.

(3) *Chemical oxygen generators.* Chemical oxygen generators must be approved, classed, described, packaged, and transported in accordance with the requirements of this subchapter.

(4) *Class 1 (explosive) materials.* Prior to being transported, Class 1 (explosive) materials must be approved by the Associate Administrator in accordance with §173.56 of this subchapter. Each package containing a Class 1 (explosive) material must conform to the marking requirements in §172.320 of this subchapter.

(5) *Hazardous substances.* A material meeting the definition of a hazardous substance as defined in §171.8, must conform to the shipping paper requirements in §172.203(c) of this subchapter and the marking requirements in §172.324 of this subchapter:

(i) The proper shipping name must identify the hazardous substance by name, or the name of the substance must be entered in parentheses in association with the basic description and marked on the package in association with the proper shipping name. If the hazardous substance meets the definition for a hazardous waste, the waste code (for example, D001), may be used to identify the hazardous substance;

(ii) The shipping paper and the package markings must identify at least two hazardous substances with the lowest reportable quantities (RQs) when the material contains two or more hazardous substances; and

(iii) The letters "RQ" must be entered on the shipping paper either before or after the basic description, and marked on the package in association with the proper shipping name for each hazardous substance listed.

(6) *Hazardous wastes.* A material meeting the definition of a hazardous waste (see §171.8) must conform to the following:

(i) The shipping paper and the package markings must include the word "Waste" immediately preceding the proper shipping name;

(ii) The shipping paper must be retained by the shipper and by each carrier for three years after the material is accepted by the initial carrier (see §172.205(e)(5)); and

(iii) A hazardous waste manifest must be completed in accordance with §172.205 of this subchapter.

(7) *Marine pollutants.* Except for marine pollutants (see §171.8) transported in accordance with the IMDG Code, marine

pollutants transported in bulk packages must meet the shipping paper requirements in §172.203(l) of this subchapter and the package marking requirements in §172.322 of this subchapter.

(8) *Organic peroxides*. Organic peroxides not identified by technical name in the Organic Peroxide Table in §173.225(c) of this subchapter must be approved by the Associate Administrator in accordance with §173.128(d) of this subchapter.

(9) [Reserved]

(10) *Poisonous by inhalation materials*. A material poisonous by inhalation (see §171.8) must conform to the following requirements:

(i) The words “Poison-Inhalation Hazard” or “Toxic-Inhalation Hazard” and the words “Zone A,” “Zone B,” “Zone C,” or “Zone D” for gases, or “Zone A” or “Zone B” for liquids, as appropriate, must be entered on the shipping paper immediately following the basic shipping description. The word “Poison” or “Toxic” or the phrase “Poison-Inhalation Hazard” or “Toxic-Inhalation Hazard” need not be repeated if it otherwise appears in the shipping description;

(ii) The material must be packaged in accordance with the requirements of this subchapter;

(iii) The package must be marked in accordance with §172.313 of this subchapter; and

(iv) Except as provided in subparagraph (B) of this paragraph (b)(10)(iv) and for a package containing anhydrous ammonia prepared in accordance with the Transport Canada TDG Regulations, the package must be labeled or placarded with POISON INHALATION HAZARD or POISON GAS, as appropriate, in accordance with Subparts E and F of part 172 of this subchapter.

(A) For a package transported in accordance with the IMDG Code in a closed transport vehicle or freight container, a label or placard conforming to the IMDG Code specifications for a “Class 2.3” or “Class 6.1” label or placard may be substituted for the POISON GAS or POISON INHALATION HAZARD label or placard, as appropriate. The transport vehicle or freight container must be marked with the identification numbers for the hazardous material in the manner specified in §172.313(c) of this subchapter and placarded as required by subpart F of part 172 of this subchapter.

(B) For a package transported in accordance with the Transport Canada TDG Regulations in a closed transport vehicle or freight container, a label or placard conforming to the TDG Regulations specifications for a “Class 2.3” or “Class 6.1” label or placard may be substituted for the POISON GAS or POISON INHALATION HAZARD label or placard, as appropriate. The transport vehicle or freight container must be marked with the identification numbers for the hazardous material in the manner specified in §172.313(c) of this subchapter and placarded as required by subpart F of part 172 of this subchapter. While in transportation in the United States, the transport vehicle or freight container may also be placarded in accordance with the appropriate TDG Regulations in addition to being placarded with the POISON GAS or POISON INHALATION HAZARD placards.

(11) *Class 7 (radioactive) materials*. (i) Highway route controlled quantities (see §173.403 of this subchapter) must be shipped in accordance with §§172.203(d)(4) and (d)(10); 172.507, and 173.22(c) of this subchapter;

(ii) For fissile materials and Type B, Type B(U), and Type B(M) packagings, the competent authority certification and any necessary revalidation must be obtained from the appropriate competent authorities as specified in §§173.471, 173.472, and 173.473 of this subchapter, and all requirements of the certificates and revalidations must be met;

(iii) Type A package contents are limited in accordance with §173.431 of this subchapter;

(iv) The country of origin for the shipment must have adopted the edition of SSR-6 of the IAEA Regulations referenced in §171.7.

(v) The shipment must conform to the requirements of §173.448, when applicable;

(vi) The definition for “radioactive material” in §173.403 of this subchapter must be applied to radioactive materials transported under the provisions of this subpart;

(vii) Except for limited quantities, the shipment must conform to the requirements of §172.204(c)(4) of this subchapter; and

(viii) Excepted packages of radioactive material, instruments or articles, or articles containing natural uranium or thorium must conform to the requirements of §173.421, §173.424, or §173.426 of this subchapter, as appropriate.

(ix) Packages containing fissile materials must conform to the requirements of §173.453 to be otherwise excepted from the requirements of subpart I of part 173 for fissile materials.

(12) *Self-reactive materials*. Self-reactive materials not identified by technical name in the Self-reactive Materials Table in §173.224(b) of this subchapter must be approved by the Associate Administrator in accordance with §173.124(a)(2)(iii) of this subchapter.

[72 FR 25172, May 3, 2007, as amended at 72 FR 55684, Oct. 1, 2007; 73 FR 57004, Oct. 1, 2008; 76 FR 3345, Jan. 19, 2011; 76 FR 56311, Sept. 13, 2011; 78 FR 60751, Oct. 2, 2013; 78 FR 65468, Oct. 31, 2013; 80 FR 1116, Jan. 8, 2015; 80 FR 72920, Nov. 23, 2015; 81 FR 35513, June 2, 2016; 82 FR 15837, Mar. 30, 2017]

[Need assistance?](#)

Class 2, Gases

5.10 Means of Containment for Class 2, Gases

- (1) A person must not offer for transport, handle or transport dangerous goods included in Class 2, Gases, in a means of containment unless the means of containment is manufactured, selected and used in accordance with
 - (a) for transport by road vehicle,
 - (i) CGSB-43.123, if the gas is included in Class 2.1, Flammable Gases or Class 2.2, Non-flammable and Non-toxic Gases,
 - (ii) CSA B340,
 - (iii) CSA B342,
 - (iv) CSA B622, except clause 4.3 of that standard, and, despite any indication to the contrary in CSA B620, Annex B of CSA B620,
 - (v) CSA B625, or
 - (vi) TP14877, if the means of containment is a ton container;
 - (b) for transport by railway vehicle,
 - (i) CGSB-43.123, if the gas is included in Class 2.1, Flammable Gases or Class 2.2, Non-flammable and Non-toxic Gases,
 - (ii) TP14877,
 - (iii) CSA B340,
 - (iv) CSA B342, or
 - (v) CSA B625;
 - (c) for transport by aircraft,
 - (i) CGSB-43.123, if the gas is included in Class 2.1, Flammable Gases or Class 2.2, Non-flammable and Non-toxic Gases,
 - (ii) CSA B340, or
 - (iii) CSA B342; and
 - (d) for transport by vessel,
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 - (i) CGSB-43.123, if the gas is included in Class 2.1, Flammable Gases or Class 2.2, Non-flammable and Non-toxic Gases,
 - (ii) TP14877,
 - (iii) CSA B340,
 - (iv) CSA B342,
 - (v) CSA B622, except clause 4.3 of that standard, and, despite any indication to the contrary in CSA B620, Annex B of CSA B620, or
 - (vi) CSA B625.
- (2) For the purposes of this section, clause 5.1.3(a) of CSA B340 must be read as requiring a cylinder, sphere or tube to be inspected before it is filled by verifying, through its markings or, in the case of a horizontally mounted container, the markings affixed to the vehicle or frame used to transport the container, that the cylinder, sphere or tube
 - (a) was manufactured in accordance with a container specification that is designated by the prefix “CTC”, “ICC”, “TC” or “DOT” and is listed in Table 29 of CSA B339;
 - (b) is an equivalent container as defined in CSA B340 and was manufactured in accordance with a container specification that is designated by the prefix “BTC”, “CRC”, “ICC” or “DOT”;
 - (c) was manufactured in accordance with a container specification that is designated by the prefix “BTC”, “CRC”, “ICC” or

“DOT” followed by “3”, “3A480X”, “3B”, “3BN”, “4B240FLW”, “8”, “8AL” or “8WC”;

- (d) has the letters “CRC”, “BTC”, “CTC” or “TC” displayed on it and was manufactured before January 1, 1993 in accordance with the conditions of a special permit that was issued under the regulations for the transportation of dangerous goods by rail in force before December 5, 1991; or
 - (e) has the letters “ICC” or “DOT” displayed on it and was manufactured before January 1, 1993 in accordance with a packaging or handling exemption that was issued under Subpart B of Part 107 of 49 CFR.
- (3) For the purposes of this section, clause 5.1.4 of CSA B340 must be read as requiring a cylinder, sphere or tube that is referred to in paragraph (2)(a), (b) or (c) and is due for requalification to be requalified – before being filled – in accordance with the requirements of
- (a) CSA B339, if the requalification is performed in Canada;
 - (b) Part 180 of 49 CFR, if the requalification is performed in the United States; or
 - (c) CSA B339 or Part 180 of 49 CFR, if the requalification is performed outside both Canada and the United States.
- (4) For the purposes of this section, clause 5.1.4 of CSA B340 must be read as requiring
- (a) a cylinder, sphere or tube that is referred to in paragraph (2)(d) or (e) and that is due for requalification to be filled and requalified in accordance with the applicable special permit or exemption; and
 - (b) the requalification to be performed by a facility that is registered in accordance with CSA B339 or approved in accordance with Subpart I of Part 107 of 49 CFR.
- (5) For the purposes of this section, clause 5.1.4 of CSA B340 must be read as requiring a cylinder, sphere or tube that is referred to in subsection (2) that is due for requalification and that does not meet the requirements of the prefill inspection to be rejected and not be filled until the cause for rejection has been corrected.
- (6) For the purposes of this section, the following requirements apply in respect of a report of requalification, repair, reheat treatment or rebuilding that is referred to in clause 24.7 of CSA B339:
- (a) the person who prepares the report must give a copy of it to the owner of the means of containment;
 - (b) the person who prepares the report and the owner must each keep a copy of the report for 10 years; and
 - (c) the owner must, during the 10-year period, give a copy of the report to any person to whom ownership of the means of containment is transferred.
- (7) For the purposes of this section, clause 4.1.7 of CSA B342 must be read as requiring a UN pressure receptacle, including its closures,
- (a) to comply with the design, construction, initial inspection, and testing requirements set out in the edition of CSA B341 that was incorporated by reference in these Regulations at the time of manufacture;
 - (b) to comply with the design, construction, initial inspection, and testing requirements set out in an edition of CSA B341 that was not yet incorporated by reference in these Regulations at time of manufacture but for which early implementation was authorized by an equivalency certificate issued by the Minister; or
 - (c) to be marked with the letters “USA” in accordance with section 178.71(q)(3) of 49 CFR and to comply with the design, construction, initial inspection, and testing requirements set out in Subpart C of Part 178 of 49 CFR.
- (8) For the purposes of this section, if a UN pressure receptacle is used in accordance with CSA B342 and an outer packaging is required by that standard,
- (a) the UN pressure receptacle must be firmly secured within the outer packaging; and
 - (b) one or more inner packagings may be enclosed in the outer packaging, unless otherwise specified in clause 5 of CSA B342.
- (9) For the purposes of this section, clause 4.2.3 of CSA B342 must be read as requiring a multiple-element gas container
- (a) to comply with the design, construction, initial inspection, and testing requirements set out in the edition of CSA B341 that was incorporated by reference in these Regulations at the time of manufacture;

- (b) to comply with the design, construction, initial inspection, and testing requirements set out in an edition of CSA B341 that was not yet incorporated by reference in these Regulations at time of manufacture but for which early implementation was authorized by an equivalency certificate issued by the Minister; or
 - (c) to be marked with the letters “USA”, denoting the United States as the country of approval, in accordance with section 178.75(j)(1) of 49 CFR, and to comply with the design, construction, initial inspection, and testing requirements set out in Subpart C of Part 178 of 49 CFR.
- (10) For the purposes of this section, clause 5.5.1(b) of CSA B342 must be read as requiring a UN cylinder for adsorbed gases
- (a) to comply with the design, construction, initial inspection, and testing requirements set out in the edition of CSA B341 that was incorporated by reference in these Regulations at the time of manufacture; or
 - (b) to be marked with the letters “USA” in accordance with section 178.71(q)(3) of 49 CFR and to comply with the design, construction, initial inspection, and testing requirements set out in Subpart C of Part 178 of 49 CFR.
- (11) For the purposes of this section, a person who uses a standardized means of containment in accordance with CSA B622 must use a means of containment that
- (a) is manufactured in accordance with CSA B620 if it was manufactured in Canada on or after August 31, 2008; and
 - (b) is tested and inspected in accordance with CSA B620 if its most recent periodic re-test or periodic inspection was performed in Canada on or after August 31, 2008.
- (12) Despite paragraph 11(a), a standardized means of containment that is a TC 51 portable tank and that is used in accordance with CSA B622 may be manufactured in accordance with CSA B620-09.
- (13) For the purposes of subsection (12), the following requirements of CSA B622 do not apply:
- (a) the requirement in clause 4.2 respecting TC 51 portable tanks; and
 - (b) the requirement in the footnote respecting TC 51 portable tanks after Table 1 to clause 4.4.3.

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5.11 UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES *SOR/2014-152*

Despite section 5.10, a person must not handle, offer for transport or transport dangerous goods that are UN1950, AEROSOLS, or UN2037, GAS CARTRIDGES, unless they are contained in a means of containment that is manufactured, selected and used in accordance with CGSB-43.123.

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Classes 3, 4, 5, 6.1, 8 and 9 Dangerous Goods

5.12 Small Means of Containment

- (1) A person must not offer for transport, handle or transport dangerous goods included in Class 3, 4, 5, 6.1, 8 or 9 in a small means of containment unless it is a means of containment that is selected and used in accordance with Part II of CGSB-43.146 or a means of containment that is selected and used in accordance with sections 2 and 3 and with Part 2 of TP14850.

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- (2) A person must not reuse a steel or plastic drum with a capacity greater than or equal to 150 L to handle, offer for transport or transport dangerous goods that are liquid and are included in Class 3, 4, 5, 6.1, 8 or 9 unless

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- (a) for a steel drum, the requirements for the reconditioning, remanufacturing and repair in Part II of CGSB-43.126 are complied with and the drum reconditioning, remanufacturing and repair facility is registered with Transport Canada in accordance with the requirements of Appendix A of CGSB-43.126; or

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- (b) for a plastic drum, the requirements for the reconditioning, remanufacturing and repair in Part III of CGSB-43.126 are complied with and the drum reconditioning, remanufacturing and repair facility is registered with Transport Canada in