

## 8.10 Inspection and test reports

### 8.10.1

Following any inspection or test of a portable tank required by this Standard, a written “inspection and test report” shall be produced by the inspection and test facility.

### 8.10.2

An inspection and test report shall include at least the following:

- a) the owner’s and, if applicable, the owner’s designate’s name, address, telephone number, and e-mail address;
- b) the name, business address, and registration number of the registered facility performing the inspection or test;
- c) for each inspection or test
  - i) the date and type of the inspection or test performed;
  - ii) a listing of all items that were either inspected or tested (a checklist is acceptable);
  - iii) when a pressure test is performed, the test pressure and test medium used; and
  - iv) a reference to the applicable inspection or test procedure that was used to perform the inspection or test;
- d) a statement that
  - i) no defect or damage was discovered; or
  - ii) describes the location, nature, and severity of damage or defects found, how they were discovered, and the nature of any repair or replacement undertaken to rectify the damage or defect, and the results of any subsequent inspection and test;
- e) a statement of the disposition of the portable tank after the inspection or test, such as “tank returned to service” or “tank scrapped”;
- f) the name, qualification(s), and certification(s) of each person who performed every inspection or test;
- g) the signature of the person at the Registered Facility responsible for compliance; and
- h) the signature of the Independent Inspector who witnessed each inspection or test.

### 8.10.3

The inspection and test report required by Clause [8.10.1](#) shall be provided to the portable tank owner (or owner’s designate) and the tank manufacturer, where applicable, and retained by the registered facility as well as the independent inspector, in accordance with Clause [9.3](#).

## 8.11 Portable tank repairs

### 8.11.1

All portable tank repairs shall be performed

- a) by facilities registered with the Director pursuant to Clause [9](#); and
- b) in accordance with detailed written procedures that are approved by the portable tank owner or owner’s designate and that take into account the portable tank’s original design and construction requirements.

### 8.11.2

Repairs to a portable tank shall not cause, or contribute to the cause of, leakage or cracks, or increase the likelihood of leakage or cracks near areas of stress concentration due to cooling metal shrinkage in welding operations, sharp fillets, reversal of stresses, or other reasons.

### 8.11.3

When an existing opening in a tank shell is closed, the closure shall be accomplished by internally and externally welding a plate to the shell. When applicable, plate material and welding shall comply with all applicable requirements of the pressure vessel code to which the shell is designed.

### 8.11.4

In addition to the applicable requirements of Clause [8.11](#), all repairs to a portable tank shell (with the exception of “U”-stamped tanks) shall comply with all applicable technical requirements of the NBIC, except for the requirement that inspectors hold a commission issued by the NBIC and the requirement to have the repairs certified with the “R” stamp code symbol.

### 8.11.5

In addition to the applicable requirements of Clause [8.11](#), all repairs to a portable tank shell that is marked with an ASME “U” stamp code symbol shall be performed in accordance with all applicable technical and administrative requirements of the NBIC and shall be certified with the “R” stamp code symbol.

### 8.11.6

After the completion of any repair to a portable tank shell, the portable tank shall undergo at least the following inspections and tests, which shall all be witnessed by an independent inspector:

- a) a verification that the portable tank conforms to its original design and construction characteristics;
- b) a verification that all applicable inspection and test requirements of the pressure vessel code to which the shell is designed and constructed are met;
- c) an internal and external examination, as specified in Clause [8.5](#), of the portable tank and its fittings with due regard to the dangerous goods to be transported;
- d) a leak test, as specified in Clause [8.8](#);
- e) a pressure test, as specified in Clause [8.7](#), to the original test pressure of the portable tank. When the portable tank shell and service equipment have been pressure tested separately, they shall also be subjected together after assembly to a leak test as specified in Clause [8.8](#); and
- f) a test of the operation of all service equipment (including but not limited to pressure-relief devices and stop valves).

### 8.11.7

After the completion of the inspections and tests required by Clause [8.11.6](#), a written “post-repair inspection and test report” shall be produced by the independent inspector and the facility that conducted the inspections and tests. The report shall conform to the requirements of Clause [8.10](#).

## 8.12 Portable tank modifications

### 8.12.1 General

Except as specified in Clauses [8.12.2.1](#) to [8.12.2.4](#), all modifications to a portable tank shall be approved in accordance with Clause [7.2](#) and carried out by a registered facility.

### 8.12.2 Permitted modifications

#### 8.12.2.1

The modifications specified in Clauses [8.12.2.2](#) to [8.12.2.4](#) may be made only if the design specifications of the portable tank remain unchanged in all other respects.

### 8.12.2.2

An interior or exterior surface treatment (such as a protective coating, galvanizing, or fluorination) may be added to a portable tank if the

- a) treatment does not affect the mechanical properties of the treated material; and
- b) requirements of Clause [5.1.2.16](#) are met.

### 8.12.2.3

A non-integral liner that is made of a more flexible material than the body may be added to a portable tank if the mass of the liner is less than 2% of the tare mass and the liner does not affect the performance of the closure system.

### 8.12.2.4

Non-structural accessories, such as placard holders or protective plates, may be added to a portable tank if the change in tare mass of the portable tank is equal to or less than 5%.

## 9 Registrations and documentation

### 9.1 Registration requirements

#### 9.1.1 Scope

The manufacture\*, modification, inspection, test, or repair of the following portable tanks shall be performed at a facility registered for the respective purpose with the Director:

- a) UN portable tanks;
- b) IM 101 and IM 102 portable tanks; and
- c) IMO-type 1, 2, 5, or 7 portable tanks.

\* *IM and IMO-type portable tanks are no longer manufactured.*

#### 9.1.2 Registration of facilities for portable tank manufacture, modification, inspection, test and repair

##### 9.1.2.1

A certificate of registration shall be obtained from the Director prior to manufacturing, modifying, inspecting, testing or repairing any portable tank, subject to Clause [9.1.5](#).

##### 9.1.2.2

The following information shall be submitted by an applicant for registration:

- a) the name, address, telephone number, and e-mail address of the applicant;
- b) the name(s) and location(s) of all the facility(ies) and contact person(s) at each location (as applicable);
- c) the applicant's quality management system, including procedures for the qualification of personnel expected to carry out functions specified in this Standard;
- d) for each physical facility, detailed descriptions of the manufacturing, modification, inspection, test and/or repair functions and procedures;
- e) detailed information on the type(s) of portable tank(s) that will be manufactured, modified, inspected, tested, and/or repaired, including minimum test pressure, intended service, MAWP, and

the T Code(s) portable tank instructions (as applicable, as defined in Annex B) that apply to the portable tanks;

- f) the name and address of the Independent Inspector to be employed, where applicable; and
- g) if the facility will be manufacturing, modifying, or repairing,
  - i) portable tanks intended for non-refrigerated or refrigerated liquefied gases of Class 2; or
  - ii) tank shells that will be certified and stamped (the “U” stamp) in accordance with the requirements of the ASME Code, Section VIII, Division 1, evidence of the facility holding valid certificate(s) of authorization from ASME for the use of the “U” stamp, if involved with manufacture, from the National Board for use of the “R” stamp if involved with repair, or use of either stamp as it applies to the scope of modification.

#### 9.1.2.3

In addition to the requirements of Clause 9.1.2.2, the application for registration of a facility that is involved with manufacture or modification shall include the following information:

- a) a copy of a sample portable tank certificate of compliance; and
- b) a photo, representation, or facsimile of a completed sample UN portable tank metal identification plate that will be affixed to the portable tanks.

#### 9.1.2.4

The manufacturer is the person who manufactures or completes the manufacture of the portable tank so that it complies with this Standard.

#### 9.1.2.5

Manufacturers of auxiliary equipment such as service equipment, structural equipment, and other parts manufacturers do not need to be registered.

### 9.1.3 Registration of design reviewers and independent inspectors

#### 9.1.3.1

A certificate of registration shall be obtained from the Director by the design reviewer prior to reviewing portable tank or MEGC designs or by the independent inspector prior to conducting any activity specified for independent inspection in this Standard, subject to Clause 9.1.5.

#### 9.1.3.2

The following information shall be submitted by an applicant for registration:

- a) the name, street address, mailing address, telephone number, and e-mail address and principal business activity of the applicant, contact person (if applicable) and employer (if applicable). If the contact person is not the one responsible for the approval of UN portable tank or MEGC designs, the contact information listed above shall also be provided for this person;
- b) the applicant’s quality management system, including control procedures for the qualification of personnel involved or expected to be involved in the design review process and/or independent inspections of UN portable tanks or MEGCs;
- c) in the case of design reviewers, evidence of the applicant’s status to practice engineering;
- d) the qualifications and experience of the applicant and/or person responsible for approving UN portable tank or MEGC designs, including
  - i) knowledge of the *Transportation of Dangerous Goods Act, 1992*, the *Transportation of Dangerous Goods Regulations*, this Standard, the applicable sections of the ASME Code, Section VIII, Division 1 and CSA B341, as applicable;

- ii) the ability to review and evaluate design drawings and stress calculations for portable tanks and/or MEGCs, as applicable; and
- iii) a summary of work experience demonstrating at least one year of experience in the design of pressure vessels. Information shall include, for each work experience, the following:
  - 1) employer;
  - 2) position;
  - 3) years of service; and
  - 4) responsibilities;
- e) the design review, inspection and/or test functions that the applicant intends to perform or witness, as applicable and the type(s) of portable tank(s) or MEGCs on which these function will be performed, including minimum test pressure, intended service, MAWP, and the T Code(s) portable tank instructions (as applicable, as defined in Annex B) that apply to the portable tanks; and
- f) a copy of a sample design approval certificate and/or inspection report, as applicable.

### 9.1.3.3

In addition to the requirements of Clause [9.1.3.2](#), applications for registration to witness the dynamic longitudinal impact test shall include the following information:

- a) the procedure(s) and criteria that will be used for assessing new designs; and
- b) the acceptance criteria used during the dynamic longitudinal impact test.

### 9.1.3.4

If applicable, the certificate of registration will include the design reviewer's registered mark, which shall be used by the design reviewer in accordance with Clause [7.1.4.10.2](#) for portable tanks or CSA B341 for MEGCs.

### 9.1.3.5

The applicant for the certificate of registration shall not be directly or indirectly controlled by any person or firm that designs, manufactures, repairs, or tests portable tanks. The design review agency and the independent inspector may be the same entity.

## 9.1.4 Registration of facilities performing the dynamic longitudinal impact test

Registration requirements of impact test facilities performing the dynamic longitudinal impact test are in Clause [C.1.3.3](#).

## 9.1.5 Additional registration requirements and conditions

### 9.1.5.1

The Director will register the applicant and issue a certificate of registration if the Director is satisfied that the applicant's capabilities, competence, experience, and knowledge, and is capable of consistently complying with the applicable requirements of this Standard and, in the case of MEGCs, CSA B341.

### 9.1.5.2

A certificate holder shall carry out only those functions that are indicated on the certificate of registration and shall perform those functions only at the location(s) indicated on the certificate.

### 9.1.5.3

A certificate of registration is required for each facility operated by the applicant.

#### 9.1.5.4

The Director may revoke the certificate of registration of an applicant if the Director is satisfied that the applicant is not, or is not capable of, complying with the applicable requirements of this Standard and, in the case of MEGCs, CSA B341.

### 9.1.6 Amendments to certificates of registration

#### 9.1.6.1

An application for amending a certificate of registration shall be submitted to the Director by a certificate holder if there is any change that requires updating the information that was previously submitted to the Director for the purpose of obtaining the certificate.

#### 9.1.6.2

The application shall include the following information:

- a) the name and address of the applicant (new and former name and addresses, where applicable);
- b) the certificate of registration number and expiry date; and
- c) the reason for the request.

#### 9.1.6.3

The Director will review the application for amendment submitted by a certificate holder and, if the Director is satisfied that the applicant is knowledgeable in and capable of consistently complying with the applicable requirements of this Standard, the Director may issue an amended certificate of registration.

### 9.1.7 Renewal of certificate of registration

#### 9.1.7.1

A certificate of registration is valid for 5 years, unless it is revoked by the Director.

#### 9.1.7.2

Application for the renewal of a certificate of registration is required no later than 5 years from the date of issue of the previous certificate. An application for renewal of a certificate of registration shall include information required in clause [9.1.2](#), [9.1.3](#), or [9.1.4](#), as applicable.

#### 9.1.7.3

A certificate of registration shall remain valid beyond the expiry date if

- a) an application for renewal of registration is submitted to the Director, in accordance with Clause [9.1.2](#), [9.1.3](#), or [9.1.4](#) (as applicable), at least 90 calendar days prior to the expiry date;
- b) a new certificate is not issued;
- c) the application for renewal has not been rejected by the Director; and
- d) the certificate due to expire is not revoked by the Director.

## 9.2 Certification of compliance and documentation

### 9.2.1 Affixing of metal identification plate

To signify compliance with this Standard, a manufacturer shall affix a metal identification plate on each portable tank in accordance with the provisions of Clause [5.1.8.4](#).

## 9.2.2 Certificate of compliance

### 9.2.2.1

The manufacturer shall certify that the portable tank conforms to the information on the metal identification plate by issuing a certificate of compliance for each portable tank.

### 9.2.2.2

Each certificate of compliance shall be verified and countersigned by the independent inspector.

### 9.2.2.3

Each certificate of compliance shall identify the portable tank by referring to the tank's serial number.

### 9.2.2.4

The certificate of compliance shall also contain at least the following:

- a) the manufacturer's name and business address, and the manufacturing facility address where the portable tank has been manufactured;
- b) the manufacturer's Transport Canada Certificate of Registration Number;
- c) a copy of the portable tank's design approval certificate;
- d) all information required to be marked on the metal identification plate or plates, as set out in Clause [5.1.8.4](#);
- e) a statement certifying that all parts of the portable tank, its markings, and its service equipment comply with the requirements of this Standard;
- f) for portable tanks that are required to be designed, constructed, certified, and stamped (the "U" stamp) in accordance with the applicable requirements of the ASME *Code*, Section VIII, Division 1, evidence that the portable tank is designed, constructed, certified, and stamped (the "U" stamp) in accordance with the applicable requirements of the ASME *Code*, Section VIII, Division 1;
- g) copy of the initial inspection and test report required by Clause [5.5.5](#);
- h) the signature, name, and business address of the independent inspector;
- i) the signature, name, and business address of the person at the manufacturer who is responsible for compliance; and
- j) the date of issuance of the certificate of compliance.

## 9.3 Documentation: Issuing, retention, and transfer

### 9.3.1 Manufacturer's responsibility

The manufacturer shall

- a) provide a copy of the certificate of compliance (which includes the inspection during manufacturing report as well as the initial inspection and test report) to the purchaser or owner of a portable tank or, if applicable, to the owner's designate; and
- b) retain a copy of the certificate of compliance including the inspection during manufacturing as well as the initial inspection and test report for a minimum of 20 years from the date of manufacture.

### 9.3.2 Independent inspector's responsibility

The registered independent inspector shall

- a) provide a copy of all inspection and test reports to the portable tank owner or owner's designate and the tank manufacturer, where applicable; and
- b) retain a copy of all inspection and test reports for a minimum of 20 years from the date of their performance.

### **9.3.3 Owner's responsibility**

The owner or owner's designate of a portable tank shall retain the portable tank's certificate of compliance, as well as all inspection and test reports, for as long as the portable tank remains in service.

### **9.3.4 Transfer of ownership**

In the case of transfer of ownership of a portable tank, all documents pertaining to the portable tank, including the certificate of compliance and all inspection and test reports, shall be transferred to and retained by the new owner or owner's designate.

### **9.3.5 Inspection and test facility's responsibility**

The registered facility performing the inspection(s) or test(s) shall retain a copy of all inspection and test reports for a minimum of 20 years from the date of their performance.



## Annex A (normative)

### List of dangerous goods

**Note:** This Annex is a mandatory part of this Standard.

#### A.1 Headings of Table A.1

The following describes the headings of the columns in Table [A.1](#):

- Column 1: UN number — this column gives the UN number assigned to the dangerous goods under the UN system.
- Column 2: Shipping name and description — this column gives the shipping names for dangerous goods, by UN number, within each primary class and within each packing group.
- Column 3: Class — this column gives the Class assigned to the dangerous goods.
- Column 4: Subsidiary class — this column gives any Subsidiary class assigned to the dangerous goods.
- Column 5: P.G. — this column gives the Packing Group of the dangerous goods.
- Column 6: Special Provisions, Portable Tank Instructions, and Tank Provisions — this column lists the Special Provisions (SP Notes), Portable Tank Instructions (T Codes), and Tank Provisions (TP Notes) that apply to the dangerous goods. The SP Notes, T Codes, and TP Notes are described in Annex [B](#).

#### A.2 “PROHIBITED”

The word “PROHIBITED” used in this Annex means that the handling, offering for transport, or transport of the dangerous goods by IM, IMO, or UN portable tanks is prohibited.

**Table A.1**  
**List of dangerous goods**  
(See Clauses [4.5](#), [6.1.5](#), [6.2.3.1](#), [6.3.1.2](#), [A.1](#), [B.1](#), and [B.3](#) and Table [6.1](#).)

1	2	3	4	5	6
UN number	Shipping name and description	Class	Subsidiary class	P.G.	Special provisions (T Codes) Tank provisions (TP Notes)
<b>Dangerous Goods of Class 1</b>					
ANY	ALL DANGEROUS GOODS OF CLASS 1	1			SP-999
<b>Dangerous Goods of Class 2</b>					
ANY	ALL DANGEROUS GOODS OF CLASS 2 WITH ANY SUBSIDIARY CLASS, EXCEPT ALL CLASS 2 DANGEROUS GOODS LISTED BELOW	ANY	ANY OR NONE		PROHIBITED
<b>NON-REFRIGERATED LIQUEFIED GAS DANGEROUS GOODS</b>					
Listed in T50	NON-REFRIGERATED LIQUEFIED GAS DANGEROUS GOODS LISTED IN PORTABLE TANK INSTRUCTION T50, EXCEPT THE ONES LISTED BELOW	ANY	ANY or NONE		SP-1 T50
1017	CHLORINE	2.3	5.18		T50 TP19

(Continued)

**Table A.1 (Continued)**

1	2	3	4	5	6
UN number	Shipping name and description	Class	Subsidiary class	P.G.	Special provisions Portable tank instructions (T Codes) Tank provisions (TP Notes)
1040	ETHYLENE OXIDE; or ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C	2.3	2.1		T50 TP20
1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)	2.3	5.1 8		T50 TP21
1079	SULPHUR DIOXIDE	2.3	8		T50 TP19
3057	TRIFLUOROACETYL CHLORIDE	2.3	8		T50 TP21
<b>CHEMICALS UNDER PRESSURE</b>					
ANY	ALL CHEMICAL UNDER PRESSURE	ANY	ANY OR NONE		T50 TP4, TP40
<b>REFRIGERATED LIQUEFIED GAS DANGEROUS GOODS</b>					
1038	ETHYLENE, REFRIGERATED LIQUID	2.1			T75 TP5
1961	ETHANE, REFRIGERATED LIQUID	2.1			T75 TP5
1966	HYDROGEN, REFRIGERATED LIQUID	2.1			T75 TP5, TP34
1972	METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID with high methane content	2.1			T75 TP5
3138	ETHYLENE, ACETYLENE AND PROPYLENE MIXTURE, REFRIGERATED LIQUID containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene	2.1			T75 TP5
3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.	2.1			T75 TP5
1003	AIR, REFRIGERATED LIQUID	2.2	5.1		T75 TP5, TP22
1073	OXYGEN, REFRIGERATED LIQUID	2.2	5.1		T75 TP5, TP22
1913	NEON, REFRIGERATED LIQUID	2.2			T75 TP5
1951	ARGON, REFRIGERATED LIQUID	2.2			T75 TP5
1963	HELIUM, REFRIGERATED LIQUID	2.2			T75 TP5, TP34
1970	KRYPTON, REFRIGERATED LIQUID	2.2			T75 TP5
1977	NITROGEN, REFRIGERATED LIQUID	2.2			T75 TP5
2187	CARBON DIOXIDE, REFRIGERATED LIQUID	2.2			T75 TP5
2201	NITROUS OXIDE, REFRIGERATED LIQUID	2.2	5.1		T75 TP5, TP22
2591	XENON, REFRIGERATED LIQUID	2.2			T75 TP5
3136	TRIFLUOROMETHANE, REFRIGERATED LIQUID	2.2			T75 TP5
3158	GAS, REFRIGERATED LIQUID, N.O.S.	2.2			T75 TP5
3311	GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.	2.2			T75 TP5, TP22

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