

# **Drinking water treatment systems**



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# Preface

This is the first edition of CSA B483.1, *Drinking water treatment systems*.

This Standard was developed in response to a request to specify plumbing, mechanical, and electrical requirements for drinking water treatment components and complete systems.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Technical Committee on Drinking Water Treatment Systems, under the jurisdiction of the Strategic Steering Committee on Plumbing Products and Materials, and was formally approved by the Technical Committee. It will be submitted to the Standards Council of Canada for approval as a National Standard of Canada.

March 2007

## Notes:

- (1) Use of the singular does not exclude the plural (and vice versa) when the sense allows.
- (2) Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.
- (3) This publication was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.
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  - (a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
  - (b) provide an explanation of circumstances surrounding the actual field condition; and
  - (c) be phrased where possible to permit a specific “yes” or “no” answer.

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are published in CSA's periodical Info Update, which is available on the CSA Web site at [www.csa.ca](http://www.csa.ca).



# B483.1-07

## **Drinking water treatment systems**

### **0 Introduction**

This Standard was developed to cover areas not covered in existing NSF Standards for drinking water treatment systems or components.

Although a drinking water treatment system might comply with or be certified to the applicable NSF Standard, plumbing, mechanical, and electrical requirements for components used for the installation of drinking water treatment systems are generally not covered by existing Standards. This Standard was developed to complement NSF Standards and to provide a single document for drinking water treatment systems.

### **1 Scope**

#### **1.1**

This Standard covers drinking water treatment systems that are

- (a) point-of-use or point-of-entry plumbed systems; and
- (b) point-of-use non-plumbed systems.

**Note:** *Drinking water treatment systems covered by this Standard are intended to be used for the reduction or inactivation of harmful substances that can be present in drinking water.*

#### **1.2**

This Standard includes electrical requirements for drinking water treatment systems that are intended

- (a) to be permanently connected, cord and plug connected, or connected through a Class 2 plug-in power supply to an electrical supply circuit of 250 V or less (i.e., 150 V maximum to ground); and
- (b) for use indoors in non-hazardous locations in accordance with the *Canadian Electrical Code, Part I*.

#### **1.3**

In CSA Standards, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; “may” is used to express an option or that which is permissible within the limits of the standard; and “can” is used to express possibility or capability. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

#### **1.4**

The values stated in SI (metric) are the standard. The values given in parentheses are for information only.

### **2 Reference publications**

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

#### **CSA (Canadian Standards Association)**

ASME A112.18.1-2005/CSA B125.1-05

*Plumbing supply fittings*

ASME A112.18.2-2005/CSA B125.2-05  
*Plumbing waste fittings*

B137 Series-05  
*Thermoplastic pressure piping compendium*

B137.5-05  
*Crosslinked polyethylene (PEX) tubing systems for pressure applications*

B137.6-05  
*Chlorinated polyvinylchloride (CPVC) pipe, tubing, and fittings for hot- and cold-water distribution systems*

B137.9-05  
*Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pressure-pipe systems*

B137.10-05  
*Crosslinked polyethylene/aluminum/crosslinked polyethylene (PEX-AL-PEX) composite pressure-pipe systems*

B137.11-05  
*Polypropylene (PP-R) pipe and fittings for pressure applications*

B1800-06  
*Thermoplastic nonpressure piping compendium*

C22.1-06  
*Canadian Electrical Code, Part I*

C22.2  
*Canadian Electrical Code, Part II*

C22.2 No. 63-93 (R2004)  
*Household refrigerators and freezers*

CAN/CSA-C22.2 No. 139-1982 (R2005)  
*Electrically operated valves*

C22.2 No. 218.2-93 (R2004)  
*Hydromassage bathtub appliances*

CAN/CSA-C22.2 No. 223-M91 (R2003)  
*Power supplies with extra-low-voltage Class 2 outputs*

**ASME International (American Society of Mechanical Engineers)**

B16.18-2001  
*Cast Copper Alloy Solder Joint Pressure Fittings*

B16.22-2001  
*Wrought Copper and Copper Alloy Solder Joint Pressure Fittings*

B16.23-2002  
*Cast Copper Alloy Solder Joint Drainage Fittings: DWV*

B16.29-2001  
*Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings: DWV*

**NSF International/ANSI (American National Standards Institute)**

42-2005e

*Drinking water treatment units — Aesthetic effects*

44-2004

*Residential cation exchange water softeners*

53-2006

*Drinking water treatment units — Health effects*

55-2004

*Ultraviolet microbiological water treatment systems*

58-2006

*Reverse osmosis drinking water treatment systems*

61-2005

*Drinking water system components — Health effects*

62-2004

*Drinking water distillation systems***UL (Underwriters Laboratories Inc.)**

429-1999

*Standard for Electrically Operated Valves*

### 3 Definitions and abbreviations

#### 3.1 Definitions

The following definitions apply in this Standard:

**Air break** — the unobstructed vertical distance, through air, between the outlet of the waste pipe and the flood level rim of the fixture.

**Note:** *In NSF Standards, air breaks are referred to as “drain system air gaps”.*

**Brine** — a salt solution used for regeneration of cation exchange water softeners.

**Component** — a part of a drinking water treatment system. Components include membranes, filters, housings, tubing, storage tanks, dispensers, valves, and connectors to the water supply and waste discharge.

**Dispenser or dispensing valve** — a terminal fitting intended for dispensing filtered or treated water only.

**Disposable component** — a component that has a life span of one year or less.

**Disposable system** — a drinking water treatment system with non-replaceable media.

**Note:** *Disposable systems generally have a life span of one year or less.*

**Diverter** — a device that is integral to a faucet or functions as an accessory and is used to direct the flow of water from a primary outlet to one or more secondary outlets.

**Faucet** — a terminal device designed to control and guide the flow of water.

**High voltage** — voltages greater than 42.4 V but not exceeding 250 V (i.e., 150 V maximum to ground).

**Low voltage** — voltages not exceeding 42.4 V peak or dc.

**Non-plumbed system** — a batch-type drinking water treatment system not intended to be connected to a water supply system.

**Note:** *Non-plumbed systems include devices such as filtering carafes or distillers.*

**Non-treated water** — water that has not passed through a water treatment system.

**Plumbed-in system** — a water treatment system intended to be connected to the water supply system.

**Point-of-entry device** — a plumbed-in drinking water treatment system with a minimum flow rate of 15 L/min (4 gpm) at 207 kPa (30 psi), used to treat the drinking water for the majority of the premises.

**Point-of-use device** — a plumbed-in or faucet-mounted drinking water treatment system used to treat the drinking water at a single tap or multiple taps but not used to treat the water for the majority of the premises.

**Note:** *A batch-type system is considered a point-of-use device.*

**System** — a series of components and accessories intended to be assembled together as a single water treatment device.

**Treated water** — water that has passed through a water treatment system.

## 3.2 Abbreviations

The following abbreviations apply in this Standard:

AL	— aluminum
CPVC	— chlorinated polyvinylchloride
PE	— polyethylene
PEX	— cross-linked polyethylene
PP-R	— polypropylene

# 4 Design requirements

## 4.1 General

### 4.1.1 Systems and components

Drinking water treatment systems and components shall comply with the requirements specified in this Standard and the structural integrity and materials extraction requirements specified in NSF/ANSI 42, NSF/ANSI 44, NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, NSF/ANSI 61, or NSF/ANSI 62, as applicable.

Point-of-use treatment systems shall comply with the health-related contaminant reduction requirements specified in NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, or NSF/ANSI 62, as applicable.

### 4.1.2 Appliances

Drinking water treatment systems that are part of appliances covered by CSA C22.2 No. 63 shall comply with the requirements for materials extraction, structural integrity, and performance with respect to health-related contaminants as specified in NSF/ANSI 42, NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, NSF/ANSI 61, or NSF/ANSI 62, as applicable.

Components such as piping, tubing, and fittings that are in contact with potable water shall be considered part of the drinking water treatment system.

## 4.2 Structural integrity

### 4.2.1 General

Where a water treatment system or component has no applicable NSF/ANSI Standard, or the applicable NSF/ANSI Standard has no structural integrity requirements, the water treatment system or component shall be tested to the structural integrity requirements of NSF/ANSI 42.

### 4.2.2 Diverters and diverter aerators

Diverters and diverter aerators shall comply with the requirements specified in

- (a) NSF/ANSI 42, NSF/ANSI 44, NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, NSF/ANSI 61, or NSF/ANSI 62, as applicable;
- (b) [Clauses 5.2.2](#) and [5.3](#) of this Standard; and
- (c) [Clauses 4.12](#) and [5.4](#) of ASME A112.18.1/CSA B125.1.

## 4.3 Systems incorporating electrical features

### 4.3.1 High voltage

Systems incorporating high-voltage electrical features shall comply with the applicable requirements of the *Canadian Electrical Code, Part II*.

### 4.3.2 Low voltage

Systems incorporating low-voltage electrical features shall receive their electrical power from

- (a) a primary battery supply;
- (b) a suitable Class 2 low-voltage transformer complying with the requirements of CAN/CSA-C22.2 No. 223; or
- (c) a combination of a transformer and fixed impedance that, as a unit, complies with the performance requirements for a Class 2 transformer as specified in Item (b).

### 4.3.3 Secondary circuits

Secondary circuits shall provide a single level of protection and shall comply with CSA C22.2 No. 218.2.

### 4.3.4 Solenoid valves

Solenoid valves shall comply with the applicable requirements of CAN/CSA-C22.2 No. 139 or UL 429.

### 4.3.5 Test requirements

When used in conjunction with a drinking water treatment system, electrical plumbing controls, including solenoid valves, shall

- (a) be considered components of the drinking water treatment system;
- (b) be tested with the drinking water treatment system; and
- (c) comply with the requirements of [Clause 5.2](#).

Replacement of a battery during the life cycle test specified in [Clause 5.2](#) shall not constitute failure of the test.

## 4.4 Inlet and outlet connections

Inlet and outlet connections of water treatment systems shall comply with the requirements of

- (a) [Clause 4.4](#) or [4.5](#) of ASME A112.18.1/CSA B125.1;
- (b) ASME B16.18 or ASME B16.22 for soldered copper;
- (c) CSA B137.5 for PEX;
- (d) CSA B137.6 for CPVC;
- (e) CSA B137.9 for PE-AL-PE;
- (f) CSA B137.10 for PEX-AL-PEX; or
- (g) CSA B137.11 for PP-R.

## 4.5 Faucets

### 4.5.1 Non-treated water

Faucets and parts of faucets that dispense non-treated water shall comply with the requirements of ASME A112.18.1/CSA B125.1.

### 4.5.2 Treated water

#### 4.5.2.1

Faucets, dispensing valves, and diverters that dispense only treated water shall comply with the hydrostatic and cyclic pressure requirements specified in NSF/ANSI 42, NSF/ANSI 44, NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, NSF/ANSI 61, or NSF/ANSI 62, as applicable, at either a working pressure of 690 kPa (100 psi) or the maximum working pressure specified by the manufacturer, whichever is greater.

#### 4.5.2.2

In addition to the requirements specified in [Clause 4.5.2.1](#) in this Standard, faucets, dispensing valves, and diverters that dispense only treated water shall comply with the applicable requirements specified in ASME A112.18.1/CSA B125.1, with the following exceptions referenced to the clause numbers in that Standard:

- (a) In [Clause 4.1.3](#), the valve seats may be non-replaceable.
- (b) [Clause 4.4](#) shall not apply to the internal connections of water treatment devices or end-point dispensers where integral to the water treatment system.
- (c) [Clause 4.9.1](#) shall not apply.
- (d) Tests shall be conducted using water at  $18 \pm 6$  °C ( $65 \pm 10$ °F).
- (e) [Clauses 5.2.2](#) and [5.2.4](#) shall not apply to disposable drinking water treatment systems or disposable components.
- (f) [Clause 5.2.3](#) shall apply only to decorative coatings.
- (g) [Clause 5.3](#) shall not apply except
  - (i) where the test requirements of [Clause 5.3](#) are referenced in applicable clauses of ASME A112.18.1/CSA B125.1; and
  - (ii) that [Clause 5.3.1.3](#) shall apply only to spouts with an outlet opening greater than 10 mm (0.39 in).
- (h) [Clause 5.4](#) shall not apply. Flow rates shall be as determined in the applicable NSF Standard.
- (i) The valve life cycle test specified in [Clause 5.6.1.2](#) shall be conducted for 100 000 cycles.
- (j) The diverter life cycle test specified in [Clause 5.6.1.5](#) shall be conducted for 50 000 cycles.
- (k) The life cycle test for diverters used in disposable units shall be conducted for 10 000 cycles.
- (l) The swing spout life cycle test shall be conducted for 10 000 cycles and without a weight attached (i.e., [Clause 5.6.4\(c\)](#) shall not apply).
- (m) The swing spout strength test specified in [Clause 5.8.3](#) shall not apply.

## 4.6 Storage tank assemblies

Storage tank assemblies for ion exchange systems shall be equipped with a tank overflow safety float valve or an overflow drain connection. The safety float shall prevent water from overflowing when a defect in the control or a power interruption fails to shut off the flow of water to the tank during the regeneration cycle. The overflow drain connection shall be capable of draining a flow of water greater than the brine tank refill flow of water without overflowing the tank. Storage tank assemblies equipped with a tank overflow safety float valve or an overflow drain connection shall comply with [Clause 5.5](#).

## 4.7 Waste connections

Waste fittings, waste fitting connections, and waste fitting air breaks shall comply with the applicable Standards of CSA B1800, ASME A112.18.2/CSA B125.2, ASME B16.23, ASME B16.29, NSF/ANSI 42, NSF/ANSI 53, or NSF/ANSI 58, as applicable.

Independent air breaks mounted above the deck shall comply with ASME A112.18.1/CSA B125.1.

**Note:** Waste fitting air breaks can be integral to faucets or can be independent.

## 5 Performance requirements, failure criteria, and test methods

### 5.1 General

#### 5.1.1 Conditioning

Before testing, test specimens shall be conditioned at ambient laboratory conditions for not less than 12 h.

#### 5.1.2 Installation for testing

For test purposes, each specimen shall be installed in accordance with the manufacturer's instructions.

### 5.2 Life cycle

#### 5.2.1 Shut-off valves

##### 5.2.1.1 Test method

Water supply line shut-off valves and replacement component check valves shall be life cycle tested for 200 cycles, as follows:

- (a) The specimen shall be installed in accordance with the manufacturer's instructions.
- (b) Water shall be supplied at  $18 \pm 6$  °C ( $65 \pm 10$ °F) and at a flowing pressure of  $345 \pm 35$  kPa ( $50 \pm 2$  psi) and a static pressure of  $550 \pm 14$  kPa ( $80 \pm 2$  psi)
- (c) For specimens with a rotary action valve, the apparatus shall be adjusted to turn the valve and any associated handle mechanism from the fully closed position to a position between 37% and 75% of the fully open position, but not exceeding 360°, and back to the fully closed position. This test shall simulate the intended operating motion of the specimen without making contact with the end stops, at a rate of 10 to 15 cycles per minute, unless the manufacturer agrees to a different rate.
- (d) Replaceable components of devices that automatically shut off the flow of water (such as check valves) shall be removed and reinstalled as intended by the manufacturer.

##### 5.2.1.2 Failure criteria

The specimen shall be considered to have failed if

- (a) the force or torque to operate the specimen before the life cycle test exceeds 45 N (10 lbf) or 1.7 N•m (15 lbf•in) when tested at  $690 \pm 14$  kPa ( $100 \pm 2$  psi) static pressure with the valve closed;
- (b) the force or torque to operate the specimen throughout and after the life cycle test exceeds 54 N (12 lbf) or 2.0 N•m (18 lbf•in) when tested at  $690 \pm 14$  kPa ( $100 \pm 2$  psi) static pressure with the valve closed;
- (c) the specimen leaks before, during, or after the life cycle test when tested with water at  $18 \pm 6$  °C ( $65 \pm 10$ °F) supplied at  $140 \pm 14$  kPa ( $20 \pm 2$  psi) and  $690 \pm 14$  kPa ( $100 \pm 2$  psi); or
- (d) the force or torque required to remove and reinstall replaceable components of devices that automatically shut off the flow of water (such as check valves) exceeds 120% of the force or torque required to remove and reinstall the component when new. Failure of the replaceable component shall not constitute failure of the test.

#### 5.2.2 Diverters and diverter aerators

##### 5.2.2.1 Test method

Diverters and diverter aerators shall be life cycle tested as follows:

- (a) The specimen shall be mounted on a standard faucet in accordance with the manufacturer's instructions.
- (b) Water at  $18 \pm 6$  °C ( $65 \pm 10$ °F) shall be supplied through the non-treated path at a flowing pressure of  $345 \pm 14$  kPa ( $50 \pm 2$  psi) and a maximum static pressure of 550 kPa (80 psi).

- (c) For specimens with a rotary action valve, the apparatus shall be adjusted to turn the diverter and any associated handle mechanism from one position to the other and back to the original position. This shall constitute one cycle. The specimen shall be cycled for the number of cycles specified in [Clause 4.5.2.2](#) (j) or (k), simulating the intended operating motion of the specimen without making contact with the end stops, at a rate of 10 to 15 cycles per minute unless the manufacturer agrees to a different rate.
- (d) For diverters with push buttons or other types of operation, the specimen shall be cycled for the number of cycles specified in [Clause 4.5.2.2](#) (j) or (k) in a manner that simulates the intended operating motion, at a rate of 10 to 15 cycles per minute unless the manufacturer agrees to a different rate.

### 5.2.2.2 Failure criteria

The specimen shall be considered to have failed if

- (a) the force or torque to operate the specimen before the life cycle test exceeds 45 N (10 lbf) or 1.7 N•m (15 lbf•in) when tested at  $690 \pm 14$  kPa ( $100 \pm 2$  psi) static pressure with the valve closed;
- (b) the force or torque to operate the specimen throughout and after the life cycle test exceeds 54 N (12 lbf) or 2.0 N•m (18 lbf•in) when tested at  $690 \pm 14$  kPa ( $100 \pm 2$  psi) static pressure with the valve closed;
- (c) the specimen leaks before, during, or after the life cycle test when tested with water supplied at  $140 \pm 14$  kPa ( $20 \pm 2$  psi) and  $690 \pm 14$  kPa ( $100 \pm 2$  psi); or
- (d) the leakage out of the non-treated path, measured before and after the life cycle test, exceeds 4 mL/min (0.001 gpm) at  $140 \pm 7$  kPa ( $20 \pm 1$  psi) and  $690 \pm 7$  kPa ( $100 \pm 1$  psi) flowing pressure, with water diverted to the treated path.

## 5.3 Thermal cycle test for threaded connections of faucet end-point devices

### 5.3.1 Test method

The thermal cycle test shall be conducted as follows:

- (a) Water at  $18 \pm 6$  °C ( $65 \pm 10$ °F) shall be supplied through the non-treated path of the specimen at  $345 \pm 14$  kPa ( $50 \pm 2$  psi) for 3 min.
- (b) Water at  $66 \pm 6$  °C ( $150 \pm 10$ °F) shall be supplied through the non-treated path of the specimen at  $345 \pm 14$  kPa ( $50 \pm 2$  psi) for 3 min.
- (c) The procedure in Items (a) and (b) shall be repeated for 250 cycles.
- (d) The flow of water at  $66 \pm 6$  °C ( $150 \pm 10$ °F) shall be stopped.
- (e) The flow of water at  $18 \pm 6$  °C ( $65 \pm 10$ °F) shall be diverted to the treated path and the outlet shall be blocked.
- (f) The specimen shall be pressurized to  $690 \pm 14$  kPa ( $100 \pm 2$  psi) for 5 min.

### 5.3.2 Failure criteria

The threaded connection shall withstand a pressure of  $690 \pm 14$  kPa ( $100 \pm 2$  psi) for 5 min without leaking or loosening.

## 5.4 Hydrostatic pressure test — Water supply line shut-off valves

### 5.4.1 Performance criteria

Water supply line shut-off valves and replacement component valves shall withstand a hydrostatic pressure test at the pressure specified in [Clause 5.4.2](#) without leakage and without permanent distortion or failure of the pressure envelope.

### 5.4.2 Test method

The specimen shall be installed in accordance with the manufacturer's instructions and shall be subjected to a hydrostatic pressure of 2068 kPa (300 psi) for 1 min with the valve closed, using water at  $18 \pm 6$  °C ( $65 \pm 10$ °F).

## 5.5 Storage tank safety float valve and overflow tests

### 5.5.1 General

The storage tank safety float valve and overflow tests shall apply only to tanks at atmospheric pressure.

### 5.5.2 Safety float valve test

#### 5.5.2.1 Test method

The safety float valve test shall be conducted as follows:

- (a) The specimen shall be installed in accordance with the manufacturer's instructions.
- (b) The storage tank shall be filled with water until the safety float valve shuts off the flow of water.
- (c) The specimen shall be subjected to a static pressure of  $550 \pm 14$  kPa ( $80 \pm 2$  psi) for 1 min using water at  $18 \pm 6$  °C ( $65 \pm 10$ °F).

#### 5.5.2.2 Failure criteria

The safety float valve shall not leak and the tank shall not overflow before the float valve shuts off the flow of water.

### 5.5.3 Overflow test

#### 5.5.3.1 Test method

The overflow test shall be conducted as follows:

- (a) The specimen, including the recommended drain line, shall be installed in accordance with the manufacturer's instructions.
- (b) The storage tank shall be filled with water until it begins to flow out of the overflow drain line.
- (c) Water at a flowing pressure of  $550 \pm 14$  kPa ( $80 \pm 2$  psi) and a temperature of  $18 \pm 6$  °C ( $65 \pm 10$ °F) shall be supplied until it can be determined that the overflow drain line flow rate is not less than the incoming flow rate.

#### 5.5.3.2 Failure criteria

The overflow drain line shall be capable of handling the incoming flow rate without overflowing the storage tank.

## 6 Markings and documentation

### 6.1 General

Drinking water treatment systems or components shall be marked with

- (a) the manufacturer's recognized name, trademark, or other mark; or
- (b) in the case of private labelling, the name, trademark, or other mark of the customer for whom the fitting was manufactured.

Markings shall be made by a permanent mark or a permanent label and shall be visible after installation.

When it is impractical to affix the information specified in Items (a) and (b) directly to the product, the information shall be included in the literature accompanying the product.

## 6.2 Instructions and information

### 6.2.1 General

Drinking water treatment systems or components shall contain instructions and product information in compliance with the applicable requirements of NSF/ANSI 42, NSF/ANSI 44, NSF/ANSI 53, NSF/ANSI 55, NSF/ANSI 58, NSF/ANSI 61, or NSF/ANSI 62.

### 6.2.2 Other requirements

For products not covered by the NSF/ANSI Standards listed in [Clause 6.2.1](#), the instruction and information requirements of the most applicable NSF Standard shall be used.

### 6.2.3 Disposable devices

The packaging and literature for disposable point-of-use devices shall state the expected life span of the device.

## 6.3 Packaging

Packages shall be marked with the model number and

- (a) the manufacturer's recognized name, trademark, or other mark; or
- (b) in the case of private labelling, the name, trademark, or other mark of the customer for whom the fitting was manufactured.

## ***Proposition de modification***

N'hésitez pas à nous faire part de vos suggestions et de vos commentaires. Au moment de soumettre des propositions de modification aux normes CSA et autres publications CSA prière de fournir les renseignements demandés ci-dessous et de formuler les propositions sur une feuille volante. Il est recommandé d'inclure

- le numéro de la norme/publication
- le numéro de l'article, du tableau ou de la figure visé
- la formulation proposée
- la raison de cette modification.

**Nom/Name:** \_\_\_\_\_

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J'accepte que la CSA conserve et utilise les renseignements ci-dessus afin de faciliter la réception de mes suggestions et commentaires.

## ***Proposal for change***

CSA welcomes your suggestions and comments. To submit your proposals for changes to CSA Standards and other CSA publications, please supply the information requested below and attach your proposal for change on a separate page(s). Be sure to include the

- Standard/publication number
- relevant Clause, Table, and/or Figure number(s)
- wording of the proposed change
- rationale for the change.

I consent to CSA collecting and using the above information to facilitate the collection of my suggestions and comments.

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