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**B149.2-15**

# Propane storage and handling code

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# Preface

This is the eleventh edition of CSA B149.2, *Propane storage and handling code*. It supersedes the previous editions, published in 2010, 2005 and 2000 by the Canadian Standards Association (CSA) as CAN/CSA-B149.2, in 1995, 1991, 1986, 1980, 1978, and 1976 by the Canadian Gas Association (CGA), and in 1969 by the Canadian Standards Association.

In 1958, the Canadian Standards Association published the first edition of CSA B149, *Installation Code for Gas Burning Appliances and Equipment*. It was superseded by later editions in 1962, 1966, and 1971.

Following the publication of the 1966 edition, the decision was made to split the Code into two parts: the first part, B149.1, dealing with the installation requirements for appliances and equipment burning natural gas; the second part, B149.2, dealing with the installation of appliances and equipment burning propane.

As a first step, B149.2 was prepared and first published in 1969.

The Canadian Gas Association was accredited by the Standards Council of Canada as the standards development organization responsible for preparing standards for gas-burning appliances and equipment, and in this connection took over responsibility for the B149 Code in 1974. New editions of the Code were subsequently published in 1976, 1978, 1980, 1986, 1991, and 1995.

On June 30, 1997, the Canadian Standards Association acquired International Approval Services (IAS), which was until then a joint venture of the American Gas Association (AGA) and the Canadian Gas Association. Under this agreement, CSA acquired the complete range of IAS standards administration, certification, and registration products and services for appliances and accessories fuelled by natural and liquefied petroleum gases. In 1998, the CSA B149 Installation Code Committee agreed to publish a *Natural Gas and Propane Installation Code* that would amalgamate the first seven sections of CAN/CGA-B149.1 and CAN/CGA-B149.2 to become CSA B149.1-00. This amalgamation was in response to the trend among the authorities having jurisdiction of combining licensing and training for natural gas and propane. The remaining sections 8 to 14 of CAN/CGA-B149.2 became CSA B149.2-00, *Propane Storage and Handling Code*.

In this 2015 edition, where a major change or addition to the previous edition of the Code has been made, the clause, table, or figure affected is identified by the symbol delta ( $\Delta$ ) in the margin. Users of the Code are advised that the change markers in the text are not intended to be all-inclusive and are provided as a convenience only; such markers cannot constitute a comprehensive guide to the revisions made to the Code. Care must therefore be taken not to rely on the change markers to determine the current requirements of the Code. As always, users of the Code must consider the entire Code and any local amendments.

The CSA B149.2 Code Committee, which is responsible for preparing this Code, consists of members of the provincial gas inspection authorities, natural gas utilities, propane distributors, appliance, equipment, and accessory manufacturers, certification organizations, and representatives from the Heating, Refrigeration and Air Conditioning Institute of Canada, the Mechanical Contractors Association of Canada, and federal government departments. This Code has been formally approved by the CSA B149.2 Technical Committee for the Propane Storage and Handling Code and by the Interprovincial Gas Advisory Council.

## 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 Standard 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 Standard.
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  - (b) provide an explanation of circumstances surrounding the actual field condition; and

(c) where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.

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- (a) Standard designation (number);
- (b) relevant clause, table, and/or figure number;
- (c) wording of the proposed change; and
- (d) rationale for the change.

# B149.2-15

## **Propane storage and handling code**

### **1 Scope**

#### **Δ 1.1**

This Code applies to

- (a) the storage, handling, and transfer of propane;
- (b) propane used as an engine fuel in other than motor vehicles; and
- (c) the installation, operation, and maintenance of *containers* and *equipment* to be used for propane at customer locations, in distribution locations and *filling plants*.

#### **Δ 1.2**

This Code does not apply to

- (a) transportation of propane;
- (b) manufacture, selection, and use of standardized means of containment under the *Transportation of Dangerous Goods Act and Regulations*;
- (c) marine or pipeline terminals;
- (d) gas where used as a feedstock in petroleum refineries or chemical plants;
- (e) utility pipeline distribution and transmission pipelines;
- (f) refrigerated storage or underground reservoirs for propane;
- (g) propane used on boats;
- (h) propane used as a propellant in aerosol *containers*;
- (i) butane fuel *cylinders* of 5.3 oz (150 g) capacity or less;
- (j) any equipment extending downstream from the inlet to any container pressure regulator (commonly referred to as first-stage regulator); and
- (k) the installation of propane fuel system components and tanks on vehicles covered by CSA B149.5.

#### **1.3**

Where the term “propane” is used, the requirements of this Code include, and apply equally to, any material that is composed predominantly of any of the following hydrocarbons or mixtures of them: propane, propylene, butanes (normal butane or isobutane), and butylenes.

#### **1.4**

The values given in yard/pound units are the standard. This Code contains SI (metric) equivalents to yard/pound units so that the Code can be used in SI (metric) units. SI (metric) equivalents may be approximate.

#### **1.5**

In this Code, unless *approved* otherwise by the *authority having jurisdiction*, “shall” indicates a mandatory requirement; “should” indicates a recommendation or that which is advised but not mandatory; and “may” indicates an advisory or optional statement. Notes to the text do not include mandatory or alternative requirements. The purpose of a note is to separate from the text explanatory or informative material that is not properly a part of this Code. Notes to figures and tables, however, are considered part of the figure or table and may be written as mandatory requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

## 1.6

This Code and any standards referenced in it do not make or imply any assurance or guarantee with respect to the life expectancy, durability, or operating performance of equipment and materials referenced in the Code.

## 2 Reference publications

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

**Note:** See [Clause I.1](#) and [Annex O](#).

### **CSA Group**

B51-14

*Boiler, pressure vessel, and pressure piping code*

B149.1-15

*Natural gas and propane installation code*

B149.3-15

*Code for the field approval of fuel-related components on appliances and equipment*

B149.5-15

*Installation code for propane fuel systems and containers on motor vehicles*

B339-14

*Cylinders, spheres, and tubes for the transportation of dangerous goods*

B340-14

*Selection and use of cylinders, spheres, tubes, and other containers for the transportation of dangerous goods, class 2*

B620-14

*Highway tanks and TC portable tanks for the transportation of dangerous goods*

B622-14

*Selection and use of highway tanks, TC portable tanks, and ton containers for the transportation of dangerous goods, Class 2*

C22.1-15

*Canadian Electrical Code, Part I*

Z240 MH Series-09 (R2014), *Manufactured homes:*

Z240.4.1-09 (R2014)

*Installation requirements for gas-burning appliances in manufactured homes*

CAN/CSA-Z240 RV Series-08 (R2013), *Recreational vehicles:*

Z240.4.2-08 (R2013)

*Installation requirements for propane appliances and equipment in recreational vehicles*

### **CGA (Compressed Gas Association)**

S-1.1-2011

*Pressure Relief Device Standards — Part 1 — Cylinders for Compressed Gases*