

Australian Standard[®]

**LP Gas—Portable and mobile
appliances**



This Australian Standard® was prepared by Committee AG-001, Gas Appliances. It was approved on behalf of the Council of Standards Australia on 23 October 2007. This Standard was published on 5 February 2008.

The following are represented on Committee AG-001:

- AGA Certification Services
 - Appliance and Component Testing
 - Australian Greenhouse Office, Department of the Environment and Heritage
 - Consumers' Federation of Australia
 - Gas Appliance Manufacturers Association of Australia
 - Gas Association New Zealand
 - Gas Technical Regulators Committee
 - Gas Utilisation Institute
 - LPG Australia
 - Master Plumbers, Gasfitters and Drainlayers New Zealand
 - Ministry of Consumer Affairs New Zealand
 - New Zealand Employers and Manufacturers Association
-

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Australian Standard[®]

LP Gas—Portable and mobile appliances

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PREFACE

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee AG-001, Gas appliances to supersede both AS 2658—1988 and AS 2658—2003, LP Gas—Portable and mobile appliances. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard incorporates Amendment No. 1 (November 2009), Amendment No. 2 (February 2011) and Amendment No. 3 (June 2013). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide uniform minimum requirements for the safe design and performance of LP Gas portable and mobile appliances supplied with gas at vapour pressure.

In the writing of this standard the committee considered relevant content from Underwriters Laboratories Inc (UL), Japan Industrial Standards (JIS), Korean Industrial Standards (KIS), American National Standards Institute (ANSI), EN (CEN-European Committee for Standardisation) Standards.

This Standard should not be regarded as a design specification or as an instruction manual.

In its preparation, consideration has been given to—

- (a) continuity of satisfactory operation of appliances and equipment;
- (b) the prevention of fire hazards, and explosions;
- (c) the prevention of injury to persons or property;
- (d) gas rules and regulations now in force; and
- (e) relevant International Standards.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

The principal differences between this edition and AS 2658—2003 are—

- (i) the addition of requirements for portable water heaters;
- (ii) amendments to requirements for cookers; and
- (iii) amendments to test pressures.

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STANDARDS AUSTRALIA

Australian Standard
LP Gas—Portable and mobile appliances

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard applies to various types of portable appliances:

- A3 | (a) Supplied from a separate gas container with vaporized LP Gas to the inlet at the vapour pressure and designed to be used—
- (i) with cartridges complying with EN 417, UL 147A/B (or equivalent);
 - (ii) for connection directly or by flexible hose assembly to an LP Gas supply cylinder complying with AS 2030.1 (or equivalent); or
 - (iii) with non-refillable DOT 39 LP Gas cylinders with a maximum water capacity of 2 L.

NOTE: The gas pressure at the burner orifice may be regulated or at vapour pressure.

- (b) Having an integral gas supply with gas storage in excess of 50 mL water capacity.

Types of portable appliances covered are:

- (i) Cooking appliances (hotplates, ovens, grills, barbecues).
- (ii) Space heating appliances designed for outdoor use not exceeding 12 MJ/h (250 g/h).
- (iii) Lighting appliances designed for outdoor use.
- (iv) Hand-held heating tools.
- (v) Portable water heaters designed for outdoor use not exceeding 30 MJ/h (620 g/h).

A3 | This Standard does not cover refrigerators or appliances that—

- (A) incorporate a regulator/hose assembly where the hose is subject to regulated pressure, with the exception of ring burners;
- (B) are intended for connection to the mains electricity supply;
- (C) incorporate a fixed LP gas supply container which may or may not be refillable;
- (D) are intended for connection to a fixed piping system in a building, caravan or boat; or
- (E) incorporate an enclosed cartridge and are intended for commercial use.

Appliances covered by this Standard are not designed for connection to a flue for the discharge of products of combustion.

NOTES:

- 1 Requirements for storage and handling of LP Gas indoors and outdoors are specified in AS/NZS 1596.
- 2 Requirements for gas cylinders are specified in AS 2030.
- A3 | 3 Requirements for cooking appliances designed to operate with regulated inlet pressure are specified in AS 4551.
- 4 Requirements for water heaters designed to operate with regulated inlet pressure are specified in AS 4552.

A3

- 5 Requirements for space heaters designed to operate with regulated inlet pressure are specified in AS 4553.
- 6 Requirements for gas refrigerators are specified in AS 4555/AG 105.
- 7 Requirements for barbecues designed to operate with regulated inlet pressure are specified in AS 4557.

Other statutory and regulatory requirements that may be applicable to the product(s) that fall within the scope of this standard. It is the manufacturer's, importer's or distributor's responsibility (as appropriate) to ensure that products comply with such requirements.

1.2 APPLICATION

This Standard specifies the construction and safety requirements for portable and mobile appliances. It also defines performance test methods, and requirements for markings and the information to be provided in instructions.

Appliances other than hand-held heating tools shall comply with the requirements of Section 2, and with the requirements of the following Sections according to the nature of the appliance:

- (a) Cookers: Section 3.
- (b) Heaters: Section 4.
- (c) Barbecues: Section 5.
- (d) Gas lights: Section 6.
- (e) Hand-held heating tools shall comply with Section 7.
- (f) Portable water heaters for outdoor use: Section 8.

1.3 REFERENCED DOCUMENTS

The documents listed in Appendix F are referred to in this Standard.

1.4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

A3

1.4.0 Ambient temperature

The temperature of the air surrounding the appliance, as measured by a dry bulb thermometer or equivalent.

1.4.1 Barbecue

An underfired cooking appliance with either an open grid or solid cooking top. The food is cooked by a combination of radiant and convective heat and may be assisted by flared fat.

1.4.2 Burner

1.4.2.1 General definition

A device that positions a flame in the desired location by delivering gas and air to that location in such a manner that continuous ignition is accomplished.

1.4.2.2 Hotplate burner

A burner on a cooking appliance intended to heat vessels placed on a pan support.

1.4.2.3 Main burner

A burner designed to fulfil a thermal function of the appliance.

NOTE: Main burners are also referred to as 'burner' throughout this Standard.

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1.4.2.4 Ring burner

A burner consisting of one or more concentric rings or ports with an integral pan support and gas control(s).

1.4.3 Burner port

The opening in a burner through which gas or an air/gas mixture issues to be ignited and burned.

1.4.4 Cartridge**1.4.4.1 Gas cartridge**

A non-refillable container with a capacity from 50 mL to 1000 mL (see EN 417 or JIS S 2148) fitted with a gas release control device and filled with gas or a mixture of gases for fuelling portable gas appliances.

NOTE: These cartridges are equivalent to UN 1950 in the Australian Dangerous Goods Code.

1.4.4.2 Pierceable gas cartridge

A cartridge without a gas release control device. The gas supply is obtained by piercing the cartridge by means of a specific device which is an integral part of the portable appliance with which the cartridge is to be used.

NOTE: These cartridges are equivalent to UN 2037 in the Australian Dangerous Goods Code.

1.4.5 Certified/Certification

Assessed by a certifying body and having a certificate number to demonstrate compliance with a Standard.

1.4.6 Certifying body

A body acceptable to the Technical Regulator that provides assurance of compliance of appliances and components with nominated Standards and other accepted safety criteria.

1.4.7 Control

Component designed to be operated manually so as to operate a control of the appliance, such as a valve, thermostat, etc.

1.4.8 Cooking device

Devices supplied with the appliance designed to hold or receive the food to be cooked (grid, turnspit, baking tray etc.).

1.4.9 Cooking grid

Cooking device designed to hold the food to be cooked; its useful component(s) can be rigid or flexible.

1.4.10 Detachable

That which can be dismantled without using a tool.

A3

1.4.10A Enclosed cartridge

A gas cartridge that is—

- (a) directly connected to the appliance; and
- (b) contained within the appliance.

1.4.11 Flame abnormality

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A flame condition that results in spitting, sputtering, lifting or floating flames, lighting back, extinction, yellow tipping causing carbon deposition, carbon deposition, objectionable odour or undue noise.