AS 4670—2006

Australian Standard®

Commercial propane and commercial butane for heating purposes

This Australian Standard® was prepared by Committee CH-038, Liquefied Petroleum Gas—Composition. It was approved on behalf of the Council of Standards Australia on 14 August 2006.
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The following are represented on Committee CH-038:

- Gas Appliance Manufacturers Association of Australia
- Gas Technical Regulators Committee
- LPG Australia
- Testing Interests Australia

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through public comment period.

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PREFACE

This Standard was prepared by Standards Australia Committee CH-038, Liquefied petroleum gas—Composition to supersede AS 4670(Int)—2005.

The following documents were used in the course of its preparation:

ISO 9162:1989	Petroleum products—Fuels (Class F)—Liquefied petroleum gases—Specifications
ALPGA	Liquefied petroleum gas for heating use specification 2000
BS 4250:1997	Specification for commercial butane and commercial propane
ASTM D1835-97	Standard specification for liquefied petroleum (LP) gases
NZS 5435:1996	Specification for liquefied petroleum gas (LPG)
Environment Australia	Fuel Standard (Autogas) Determination 2003

The objective of this Standard is to provide Regulatory Authorities and users with uniform requirements for liquefied petroleum gas (LP Gas), that would be suitable for heating purposes. The scope of the Standard is restricted to the liquid phase as it is difficult to specify composition of the vapour phase.

The objective of this revision is to confirm the 2005 interim edition as a full Standard.

The level of propene was chosen on the basis of the limited objective evidence available at the time of publication. The Committee had planned to gather further evidence through a program of appliance testing but such testing did not proceed. The topic is open to further research. It is envisaged the next revision of this Standard may review the propene levels in light of any new evidence, such as the results of appliance testing or field incident reports.

As some other values set for properties of commercial propane and butane are based on test methods and values set in Environment Australia's Fuel Standard (Autogas) Determination of 2003, these values and methods will be reviewed when that document is revised.

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1 SCOPE

This Standard specifies requirements for liquefied petroleum gas (LP Gas) products in the liquid phase as supplied for general domestic and industrial fuel purposes, in bulk and into cylinders. The requirements apply at the point of custody transfer except where withdrawal or loss of product from the vapour phase will change the composition of the product remaining in the liquid phase.

This Standard does not include requirements for storage or handling of LP Gas which are covered in AS/NZS 1596.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

1596 The storage and handling of LP Gas

ISO

3993 Liquefied petroleum gas and light hydrocarbons—Determination of density or relative density—Pressure hydrometer method

4256 Liquefied petroleum gases—Determination of gauge vapour pressure—LPG method (IP 410)

4257 Liquefied petroleum gases—Method of sampling

4259 Petroleum products—Determination and application of precision data in relation to methods of test

6251 Liquefied petroleum gases—Corrosiveness to copper—Copper strip test (IP 411)

6976 Natural gas—Calculation of calorific values, density, relative density and Wobbe index from composition

7941 Commercial propane and butane—Analysis by gas chromatography (IP 405)

8973 Liquefied petroleum gases—Calculation method for density and vapour pressure (IP 432)

13757 Liquefied petroleum gases—Determination of oily residues—High-temperature method

13758 Liquefied petroleum gases—Assessment of the dryness of propane—Valve freeze method (IP 395, ASTM D2713)

ASTM

D2784 Standard test method for sulfur in liquefied petroleum gases (oxy-hydrogen burner or lamp)

D3246 Standard test method for sulfur in petroleum gas by oxidative microcoulometry

D3700 Standard practice for obtaining LPG samples using a floating piston cylinder

