AS 4670:2018

Australian STANDARD

Commercial propane and commercial butane for heating purposes

STANDARDS Australia

AS 4670:2018

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Australian Gas Association
Department of Natural Resources and Mines, Qld
Department of State Development, SA
Energy Safe Victoria
EnergySafety, WA
Gas Appliance Manufacturers Association of Australia
Gas Energy Australia

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Preface

This Standard was prepared by Standards Australia Committee CH-038, Liquefied Petroleum Gas—Composition, to supersede AS 4670—2006.

The objective of this Standard is to provide regulatory authorities and users with uniform gas composition requirements for liquefied petroleum gases (LP Gas) that are 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 composition of the vapour phase is considered to be a direct consequence of the composition of the liquid phase.

The principal changes from the 2006 edition of this Standard are as follows:

(a) Clarification with regards to odorization, and reference to odour management in AS/NZS 1596.

(b) Reduction of the allowable total sulfur to align with other gaseous fuel limits (e.g. natural gas and autogas).

(c) Removal of reference to commercial matters.

(d) Incorporation of a requirement regarding contamination of LP Gas.

(e) Reviews of and updates to the specified test methods.

(f) Restructuring and reformatting in accordance with current Standards Australia practices.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard. Notes that appear in the main text of this Standard provide information only.

The terms 'normative' and 'informative' are used in a Standard to define the application of the appendices to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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1 Scope and general

1.1 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 to the liquid phase at the point of custody transfer.

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

NOTE The composition of the vapour phase is considered to be a direct consequence of the composition of the liquid phase.

1.2 Application

Product complying with this Standard is safe for heating purposes but is not necessarily fit for purposes in other applications.

This Standard is not intended to apply to LP Gas for supply as a process feedstock, but may provide a basis for such a specification.

1.3 Referenced documents

The following documents are referred to in this Standard:

AS 4564, *Specification for general purpose natural gas*

AS/NZS 1596, *The storage and handling of LP Gas*

AS/NZS 5263.1.3, *Gas appliances, Part 1.3: Gas space heating appliances*

AS/NZS 5601, *Gas installations*

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

ISO 4256, *Liquefied petroleum gases — Determination of gauge vapour pressure — LPG method*

ISO 4257, *Liquefied petroleum gases — Method of sampling*

ISO 4259-2, *Petroleum and related products — Precision of measurement methods and results — Part 2: Interpretation and application of precision data in relation to methods of test*

ISO 6251, *Liquefied petroleum gases — Corrosiveness to copper — Copper strip test*

ISO 6976, *Natural gas — Calculation of calorific values, density, relative density and Wobbe indices from composition*

ISO 7941, *Commercial propane and butane — Analysis by gas chromatography*

ISO 8973, *Liquefied petroleum gases — Calculation method for density and vapour pressure*

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

ISO 13758, *Liquefied petroleum gases — Assessment of the dryness of propane — Valve freeze method*

ASTM D3246, *Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry*