

Australian Standard™

**Specification for general  
purpose natural gas**

This Standard was prepared by the Gas Quality Specification Committee (AG/10) of The Australian Gas Association. As an accredited Standards Development Organisation, The Australian Gas Association develops and publishes Australian Standards. The Standard was approved on behalf of the Gas Technical Standards Council on 17 November 2002, and published on 24 January 2003.

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The following interests are represented on AG/10:

AGA (The Australian Gas Association)  
ANGVC (Australasian Natural Gas Vehicles Council)  
APIA (Australian Pipeline Industry Association)  
APPEA (Australian Petroleum Production & Exploration Association)  
Appliance and Component Testing Bodies  
GAMAA (Gas Appliance Manufacturers Association of Australia)  
Gas Distributors  
Gas Retailers  
GTRC (Gas Technical Regulators Committee)  
Industrial users

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**Specification for general  
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## PREFACE

This Standard was prepared by the Gas Quality Specification Committee (AG/10) of The Australian Gas Association. It serves as a specification for general purpose natural gas, with an emphasis on the safety of the gas for use in natural gas appliances and equipment and for use as fuel in natural gas vehicles.

In 1995 the Council of Australian Governments' Gas Reform Implementation Group (GRIG), initially known as The Gas Reform Task Force, was charged with the responsibility for developing the National Third Party Access Code for Natural Gas Pipelines. GRIG formed the view that a National Gas Specification should be developed to ensure that no technical barriers existed to promoting free and fair trade in gas at a national level.

In response to the GRIG objective the Gas Quality Specification Working Group, comprising expert industry members from The Australian Gas Association, Australian Pipeline Industry Association, and the Australian Petroleum Production and Exploration Association developed the document "Gas Quality Specification - Safe Operational Limits for Victoria and NSW". It was the intention of the Working Group that this specification would become a national specification for natural gas. The technical work carried out involved all sectors of the gas industry and it was supported by many companies, government and non-government organisations.

The quality specification developed by the Working Group was based on criteria for safety in the utilisation of natural gas in a wide variety of appliances and for suitability for transportation through pipelines. It defined the range for Wobbe Index and listed a number of component composition ranges.

Similarly, the specification provided by this Standard defines the requirements for providing a natural gas suitable for transportation and for general purpose use and provides the range of gas properties consistent with safe operation of the natural gas appliance population.

The Standard provides certainty for appliance manufacturers who supply appliances for use in the Australian market.

Gas conforming to this Standard is suitable for transportation through pipelines however operational problems have been reported in transmission systems with sulfur concentrations in natural gas below the 50 mg/m<sup>3</sup> specified in this Standard. Research on this issue is continuing. The outcome of the research will be taken into account in any review of the Standard.

Certain limits defined in the specification may be temporarily departed from under some circumstances. The issue of such departures is not within the scope of this Standard and is subject to and provided for under relevant gas sales contracts, legislation and/or government guidelines.

This Standard is not intended to apply to gas supplies where no "general purpose" users are connected to the supply system, eg. a dedicated supply to an industrial user.

Gas consumers who have specific needs that are not provided for by the specification would need to nominate in appropriate commercial contracts with gas suppliers or retailers the gas composition suitable for their particular use.

This Standard has no legal authority in its own right, but may acquire legal standing in one or more of the following circumstances:

- adoption by a government or other authority having jurisdiction over relevant gas supply pipelines or networks;

- adoption by a purchaser as a required Standard when entering into a contract for gas supply; or
- adoption where a gas supplier states that gas supplied is in accordance with the Standard.

Section 1 contains the definitions of terms or words as they apply to the Standard.

Matters of an advisory nature are indicated in the following manner:

- the word NOTE(S) followed by a statement(s);
- by the inclusion of them in an informative appendix.

The term “informative” has been used in this Standard and applies to appendices that are for information and guidance only.

Terms or words that are indicated by italics in the text are defined terms or words. However, defined terms or words in the Preface or in headings or figures are not italicised. Section 1 contains the definitions of such terms or words as they apply to the Standard. Referenced Standards are also italicised throughout.

In developing the Standard AG/10 referred to, and drew from, NZS 5442:1999: *Specification for reticulated natural gas*. The AGA acknowledges the assistance and co-operation of Standards New Zealand during the preparation of the Standard.

This Australian Standard does not purport to include all the necessary provisions of a contract. Users of Australian Standards are responsible for their correct application.

Compliance with this Australian Standard does not of itself confer immunity from legal obligations.

The contents of the Standard will be subject to periodic review and suggestions for improvement will be welcomed. These should be forwarded to:

Manager, Standardisation Policy and Services  
The Australian Gas Association  
PO Box 122 Braeside VIC 3195

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## SECTION 1 SCOPE, APPLICATION AND DEFINITIONS

### 1.1 SCOPE

#### 1.1.1 General

This specification sets out requirements that ensure that *general purpose natural gas* that is transported and supplied is safe for use in *natural gas* appliances and equipment and for use as fuel in *natural gas* vehicles.

Gas complying with this specification is safe for general purpose use but is not necessarily fit for purpose in all applications.

*General purpose natural gas* is subject to contractual requirements between buyer and seller and in some cases to National or State requirements as to quality, including allowable excursions from the specification.

#### 1.1.2 Inclusions and exclusions

The specification covers gas for general purpose use but is not intended to apply to gas supplies where no “general purpose” users are connected to the supply system, eg. a dedicated supply to an industrial user.

*General purpose natural gas* can be formed by blending gas from different supplies.

The hydrocarbon dewpoint *limit* in the specification may be more restrictive than need be for some *general purpose natural gas* supply systems that are confined to only one State. For these systems, where gas suppliers could face a necessary additional expenditure in order to meet the *limit*, the relevant State regulatory body may provide for a higher *limit* if local conditions are favourable and it is possible to avoid excessive condensation with the higher *limit*. Compliance with such higher *limit* will constitute compliance with the Standard within that State only. In the absence of such provision the *limit* in the specification shall apply.

Certain *limits* defined in the specification may be temporarily departed from under some circumstances. The issue of such departures is not within the scope of this Standard and is subject to and provided for under relevant gas sales contracts, legislation and/or government guidelines.

### 1.2 APPLICATION

The specification applies to *natural gas* –

- (a) from petroleum, landfill, biogas, coal seam and other sources where these sources provide gas for direct or blended supply on a commercial basis through supply systems serving general purpose customers;
- (b) transported and supplied to users for use in *natural gas* appliances and equipment complying with the relevant Standards. This includes *natural gas* powered vehicles, *natural gas* compressors and refuelling facilities.

This specification is not intended to apply to *natural gas* for supply as a process feedstock, but may provide a basis for such a specification.

### 1.3 APPENDICES

This specification is supported by informative Appendices that provide further information and guidance on the derivation of the requirements, additional issues to be considered in contracts and testing methods to verify compliance.