

Australian Standard[®]

**Specification for general purpose
natural gas**

STANDARDS
Australia



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- Appliance and Component Testing
 - Australian Petroleum Production and Exploration Association
 - Australian Pipeline Industry Association
 - Consumer's Federation of Australia
 - Energy Networks Association
 - Appliance Manufacturers Association of Australia
 - Gas Technical Regulators Committee
 - International Association for Natural Gas Vehicles
 - Large Industrial User
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PREFACE

This Standard was prepared by the Standards Australia Committee AG-010, Natural Gas Quality Specifications to supersede AS 4564—2005.

The principal changes from the 2005 edition of this Standard are as follows:

- (a) Additional normative limits on higher heating value and on oil.
- (b) Additional information on the derivation of the new normative limits on higher heating value and on oil.
- (c) Additional information on other contaminants including informative limits for elemental sulphur, mercury and radioactivity.
- (d) Updating of the information on the derivation of the normative limits that remain unchanged from the 2005 edition.

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.

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FOREWORD

This Standard defines the requirements for providing a natural gas suitable for both transportation and general purpose use and provides the range of gas properties consistent with safe operation of the natural gas appliance population.

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. It therefore aims to provide certainty for appliance manufacturers who supply the Australian market.

Natural gas conforming to this Standard is suitable for transportation through pipelines. The Committee has noted that fast tearing fracture control required by AS 2885.1, *Pipelines – Gas and liquid petroleum, Part 1: Design and construction* is dependent on gas composition. However, the Committee has not taken pipeline fracture into consideration in determining the gas composition limits. Management of fracture in new and existing gas pipelines remains the responsibility of the pipeline designer and operator.

STANDARDS AUSTRALIA

Australian Standard **Specification for general purpose natural gas**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements for the safe composition, transportation and supply of general purpose natural gas for use in natural gas appliances and equipment, and for use as a fuel in natural gas vehicles.

The Standard applies to natural gas that is—

- (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; and
- (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.

NOTE: Appendices A, B and C provide further information and guidance on the derivation of the requirements, additional issues to be considered in contracts and test methods to verify compliance.

1.2 OBJECTIVE

The objective of this Standard is to provide purchasers, transporters and users of natural gas with a product that is safe to use and handle, and to provide certainty of quality and performance for designers and manufacturers of appliances, equipment and vehicles which use natural gas.

1.3 APPLICATION

Gas complying with this Standard is safe for use as a general purpose natural gas but is not necessarily fit for purpose in other applications, for example, where no 'general purpose' users are connected to the supply system, e.g. a dedicated supply to an industrial user.

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

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

1.4 LEGISLATIVE AND CONTRACTUAL REQUIREMENTS AND VARIATIONS

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. These may include agreed variations or excursions from this Standard.

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, 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 Standard shall apply.