

Australian/New Zealand Standard™

**Classification of hazardous areas**

**Part 3.4: Examples of area  
classification—Flammable gases**



#### **AS/NZS 2430.3.4:2004**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MS-011, Classification of Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 31 March 2004 and on behalf of the Council of Standards New Zealand on 30 April 2004. This Standard was published on 20 May 2004.

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The following are represented on Committee MS-011:

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Australian Association of Certification Bodies  
Australian Chamber of Commerce and Industry  
Australian Gas Association  
Australian Industry Group  
Australian Liquefied Petroleum Gas Association Limited  
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Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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# Australian/New Zealand Standard™

## Classification of hazardous areas

### Part 3.4: Examples of area classification—Flammable gases

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MS-011, Classification of Hazardous Areas, to supersede AS/NZS 2430.3.4:1997, *Classification of hazardous areas, Part 3.4: Examples of area classification—Flammable gases*.

*This Standard incorporates Amendment No. 1 (March 2007). The changes required by the Amendment 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 the AS/NZS 2430.3 series of Standards is to provide guidance to the industries and statutory authorities concerned with the classification of hazardous areas.

Changes to the 1997 edition include—

- (a) incorporation of the issued amendment;
- (b) addition of Clause 8 - *High pressure gas transmission systems*;
- (c) rewording of Clauses 1, 5.1, 6.1, 6.2.4, 7.1, 7.2.7 and 7.2.12;
- (d) correction of typographical errors;
- (e) alteration of the symbols for hazardous areas zones (to align with AS/NZS 60079.10); and
- (f) update of referenced documents.

This series of Standards details examples of area classification of commonly occurring situations, based on the principles of AS/NZS 60079.10, *Electrical apparatus for explosive gas atmospheres, Part 10: Classification of hazardous areas*.

The AS/NZS 2430.3 series is as follows:

## AS/NZS

2430.3	Classification of hazardous areas—Examples of area classification
2430.3.1	Part 3.1: General
2430.3.2	Part 3.2: Vehicle workshops, vehicle parking, fuel dispensing stations and aircraft hangars
2430.3.3	Part 3.3: Flammable liquids
2430.3.4	Part 3.4: Flammable gases (this Part)
2430.3.5	Part 3.5: Refineries and major processing plants
2430.3.6	Part 3.6: Laboratories including fume cupboards and flammable medical agents
2430.3.7	Part 3.7: Landfill gas, sewage treatment and sewage pumping plants
2430.3.8	Part 3.8: Surface coatings and adhesives
2430.3.9	Part 3.9: Miscellaneous

The AS 2430 series of Standards for classification of hazardous areas used to be formed by AS 2430.1, AS 2430.2 and AS 2430.3.

AS 2430.2 was replaced by AS/NZS 61241.3 in 1999 and AS 2430.1 was replaced by AS/NZS 60079.10 in 2004.

In 1997, AS 2430.3 was split into a Series of nine Parts – 3.1 to 3.9; these initial nine Parts have been superseded by this 2004 edition.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**Australian/New Zealand Standard**  
**Classification of hazardous areas**


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**Part 3.4: Examples of area classification—Flammable gases**


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**1 SCOPE**

This Standard provides examples of area classification for areas associated with the production, processing, handling and storage of heavier-than-air and lighter-than-air flammable gases. It is Part of the AS/NZS 2430.3 series which recommends the classifications of several commonly occurring situations and should be read in conjunction with AS/NZS 2430.3.1.

Caution should be exercised when considering gases with densities close to that of air, or any lighter-than-air gas which may be cooled substantially below ambient air temperature (e.g. by expansion from a compressed liquefied, or refrigerated liquefied state); such gases may behave as either heavier-than-air gases or lighter-than-air gases and therefore the applicable Clauses should be considered.

For flammable gases in refineries and major processing plants reference should be made to AS/NZS 2430.3.5, which uses the Generalized Method of classification.

All pressures quoted in this Standard are gauge pressures unless specified otherwise.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

- |      |  |
|------|--|
| 1697 | Gas transmission and distribution systems (known as the SAA Gas pipeline code) |
| 3814 | Industrial and commercial gas-fired appliances                                 |
| 5601 | Gas installations  |

## AS/NZS

- |          |   |
|----------|---|
| 1596     | The storage and handling of LP Gas                                |
| 2430.3   | Classification of hazardous areas—Examples of area classification |
| 2430.3.1 | Part 3.1: General   |
| 2430.3.3 | Part 3.3: Flammable liquids                                       |
| 2430.3.4 | Part 3.4: Flammable gases   |
| 2430.3.5 | Part 3.5: Refineries and major processing plants                  |

## 2885

Pipelines

## 2885.1

Part 1: Design and construction

## 60079

Electrical apparatus for explosive gas atmospheres

## 60079.10

Part 10: Classification of hazardous areas

## NZS

- |        |  |
|--------|--|
| 5223   | Code of practice for high pressure gas and petroleum liquids pipelines |
| 5223.1 | Part 1: High pressure gas pipelines                                    |
| 5258   | Gas distribution networks  |
| 5261   | Gas installation   |