

Australian Standard[®] 2430.3—1987

CLASSIFICATION OF HAZARDOUS AREAS

Part 3—SPECIFIC OCCUPANCIES



STANDARDS ASSOCIATION OF AUSTRALIA
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Australian Gas Association
Australian Institute of Petroleum
Australian Liquefied Petroleum Gas Association
Confederation of Australian Industry
Department of Defence
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AUSTRALIAN STANDARD

**CLASSIFICATION OF HAZARDOUS
AREAS
Part 3
SPECIFIC OCCUPANCIES**

AS 2430.3—1987

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PREFACE

This standard was prepared by the Association's Committee on Classification of Hazardous Areas. It partly supersedes AS 2430, Part 1—1982.

This standard is intended for the guidance of industry and statutory authorities concerned with the classification of hazardous areas.

AS 2430, Part 1 was originally published in 1981 and a second edition published in 1982. Part 1 contained guidance on the classification of explosive gas atmospheres as well as an appendix (Appendix A) which dealt with Specific Occupancies. Owing to the need for making constant amendments to specific occupancies, this part of the standard is being separated from Part 1 and being published as AS 2430, Part 3.

The major changes between Appendix A of Part 1 and this Part 3 are as follows:

- (a) A new section on vehicle parking areas (Clause 5) has been introduced.
- (b) Provision made for bottom loading of rail or road tankers (Clause 9.2.4).
- (c) Amendments made to the classification of heavier-than-air flammable gases in cylinders (Clause 9.2.6).
- (d) Amendments made to the delineation of an anaesthetizing area (Clause 11.1).
- (e) Amendment made to minimum depth required for the sump of a fume cupboard (Appendix A).

It is intended that this standard be extended to include specific occupancies not already covered. Users of this standard who have developed area classifications for their installations which they feel may have a general application are invited to forward such classifications for consideration by the committee for inclusion in a future edition.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

CLASSIFICATION OF HAZARDOUS AREAS

PART 3—SPECIFIC OCCUPANCIES

1 SCOPE. This standard provides guidance on the classification of specific hazardous areas. It covers several commonly occurring situations where it would be inconvenient to apply AS 2430, Part 1.

However, the classifications given in this standard should not be used in situations where the quantity of release is either very large or very small, or where some special circumstances apply. In such situations, reference should be made to AS 2430, Part 1.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

- AS 1425 The Use of LP Gas in Internal Combustion Engines
- AS 1482 Protection by Ventilation of Electrical Equipment for Explosive Atmospheres
- AS 1596 SAA LP Gas Code
- AS 2030 SAA Gas Cylinders Code
- AS 2106 Methods for the Determination of the Flashpoint of Flammable Liquids (Closed Cup)
- AS 2229 Electrical Systems for Dispensing Equipment for Explosive Atmospheres
 - Part 1—Flammable Liquid Dispensing Equipment
 - Part 2—Liquefied Petroleum Gas Dispensing Equipment
- AS 2430 Classification of Hazardous Areas
 - Part 1—Explosive Gas Atmospheres
 - Part 2—Dusts (Including Inherently-explosive Dusts)

3 DEFINITIONS. For the purpose of this standard, the definitions of AS 2430, Part 1, and the following apply:

3.1 Area, non-hazardous—an area in which an explosive atmosphere is not expected to be present in quantities such as to require special precautions for the construction, installation and use of potential ignition sources.

NOTE: Abbreviated as 'NH' throughout this standard.

3.2 Vapour barrier—a wall or other barrier constructed and placed with the object of preventing the passage of vapour from one place to another.

NOTE: For the convenience of readers, definitions of specific areas e.g. lighter-than-air flammable gases and fruit ripening rooms, are given in the clause relating to the area.

4 COMMERCIAL GARAGES, REPAIRS AND STORAGE.

4.1 Definition. 'Commercial garages, repairs and storage' shall include areas used for service and repair operations in connection with self-propelled vehicles

in which volatile flammable liquids, flammable gases or liquefied petroleum gases are used for fuel or power, and areas in which more than three such vehicles are or may be stored at one time.

NOTES:

1. For the classification applicable to vehicle parking areas, see Clause 5.
2. For the classification applicable to areas where tank-vehicles are garaged or areas where maintenance operations may be carried out on such vehicles, see Clause 9.2.4(f).

4.2 Dispensing pumps. Garages with pumps or similar devices for the dispensing of petrol or other volatile flammable liquids shall comply with the requirements of Clause 8.

4.3 Delineations of hazardous areas.

4.3.1 At or above ground or street level. Floors at or above adjacent ground or street level provided with adequate ventilation acceptable to the Inspecting Authority shall not be deemed hazardous areas.

4.3.2 Below ground or street level.

(a) *Ventilated by natural means.* For each floor below adjacent ground or street level which is ventilated by natural means:

The entire area up to 0.5 m above the bottom of the outside doors or openings which provide the natural ventilation shall be deemed Zone 2.

(b) *Ventilated by mechanical means.* For each floor below adjacent ground or street level which is ventilated by mechanical means:

The Inspecting Authority may deem that a Zone 2 area extends up to only 0.5 m above each floor below ground or street level, provided that the garage is mechanically ventilated so that six air changes per hour are exhausted from the garage through exhaust registers located so that the bases are not more than 0.1 m above the floor and that extensive dead spots do not occur at floor level.

4.3.3 Pits or depressions. Any unventilated pit or depression below adjacent ground or floor level shall be deemed Zone 2 which shall extend up to floor level, except that an individual unventilated pit or depression may be deemed by the Inspecting Authority to be Zone 1.

Any pit or depression provided with mechanical ventilation complying with AS 1482 shall be deemed a non-hazardous area.

4.4 Liquefied petroleum gas. The requirements of Clauses 4.1 and 4.3 shall apply to garages where LP gas powered vehicles are parked or serviced, provided that the LP gas installation in the vehicles has been carried out in accordance with AS 1425.

NOTE: For locations where the LP gas installation was not carried out in accordance with AS 1425, the above requirements will need to be suitably supplemented.