

AS 2381.1—1991

Australian Standard[®]

**Electrical equipment for explosive
atmospheres—Selection,
installation and maintenance**

Part 1: General requirements

This Australian Standard was prepared by Committee EL/14, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 31 August 1990 and published on 11 February 1991.

The following interests are represented on Committee EL/14:

Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
Australian Institute of Petroleum
Confederation of Australian Industry
Department of Industrial Relations and Employment, N.S.W.
Department of Minerals and Energy, N.S.W.
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Part 1: General requirements

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electrical Equipment in Hazardous Areas to supersede AS 1076, Part 1—1977, *Code of practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications)*, Part 1: *Basic requirements*.

This is Part 1 of a series of Standards covering the selection, installation and maintenance of electrical equipment for use in areas where flammable materials are generated, processed, handled or stored, and which therefore are potentially explosive.

Each Part details requirements appropriate to one of the types of protection techniques used to achieve electrical safety and therefore must be read in conjunction with this Part.

Standard in this series are as follows:

- Part 1: General requirements
- Part 2: Flameproof enclosure d
- * Part 3: Encapsulation m
- * Part 4: Pressurization p
- * Part 5: Sand filled q
- Part 6: Increased safety e
- Part 7: Intrinsic safety i
- *† Part 8: Special protection s
- *† Part 9: Non-sparking n
- Part 10: Equipment in combustible dust (Class II) areas

The requirements specified in this Standard are supplementary to and not alternative to any requirements which would apply to installations in non-hazardous areas (see AS 3000).

Some of the more significant changes in this edition are as follows:

- (a) A thorough editorial re-arrangement has improved the grouping of related clauses.
- (b) Definitions and terminology have been revised to align with other Australian and International Standards.
- (c) Requirements which relate to the installation of equipment and wiring have been substantially revised and are now presented in the mandatory form.
- (d) Reference is made to NFPA 325M for the physical properties of flammable liquids, vapours and gases.

This Standard is intended to apply to installations, or alterations or additions thereto, made or carried out after the date of publication, but it is recommended that it should not be applied on a mandatory basis before 5 May 1991. However, if work on an installation is commenced before publication of this edition, the Authority may grant permission for the installation to be carried out in accordance with AS 1076.1—1977 (see also Clause 1.2).

Consideration of IEC 79-14, *Electrical apparatus for explosive gas atmospheres* Part 14: *Electrical installations in explosive gas atmospheres (other than mines)* was made during the preparation of this Standard.

* In the course of preparation.

† For guidance regarding these techniques refer to the relevant Parts of AS 1076.

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