

AS/NZS 60079.10.1:2009
(Incorporating Amendment No. 1)

AS/NZS 60079.10.1:2009

Australian/New Zealand Standard™

Explosive atmospheres

**Part 10.1: Classification of areas—
Explosive gas atmospheres
(IEC 60079-10-1, Ed.1.0 (2008) MOD)**



AS/NZS 60079.10.1:2009

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 13 August 2009 and on behalf of the Council of Standards New Zealand on 11 September 2009.
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The following are represented on Committee MS-011:

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Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Institute of Petroleum
Australian Paint Manufacturers' Federation
Australian Petroleum Production and Exploration Association
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Part 10.1: Classification of areas— Explosive gas atmospheres (IEC 60079-10-1, Ed.1.0 (2008) MOD)

Originated in Australia as AS 1076.2—1977 and AS 2430.1—1981.

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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 60079.10:2004 and the 2004 editions of AS/NZS 2430, Parts 3.1 to 3.9.

This Standard incorporates Amendment No. 1 (November 2013). 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 this Standard is to set out requirements for the classification of areas where flammable gas or vapour risks might arise, in order to permit the proper selection and installation of equipment for use in such hazardous areas. This Standard is for the use of manufacturers and installers of equipment as well as by inspecting authorities. It provides guidance to industries and statutory authorities concerned with the classification of hazardous areas.

This Standard is an adoption with national modifications and has been reproduced from, IEC 60079-10-1, Ed.1.0 (2008), *Explosive atmospheres – Part 10-1: Classification of areas—Explosive gas atmospheres*. It has been varied as indicated to take account of Australian/New Zealand conditions and for the protection of human health and safety, a legitimate reason under the WTO Agreement on Technical Barriers to Trade (TBT).

Variations to IEC 60079-10-1, Ed. 1.0 (2008) are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (~~example~~). Added figures are not themselves shaded, but are identified by a shaded border.

The significant technical changes with respect to the previous IEC edition are as follows:

- (a) Introduction of Annex D which deals with explosion hazard from flammable mists generated by the release under pressure of high flash point liquids.
- (b) Introduction of Clause A.3 (release rate) which gives thermodynamic equations for release rate with a number of examples for estimating release rate of fluids and gases.

This edition includes, in Annexes ZA and ZB, all of the examples of area classification from the AS/NZS 2430.3:2004 series of Standards. Annex ZC provides requirements that apply where it is decided to use Equipment Protection Levels (EPLs) as a basis for equipment selection and installation. The integration of the AS/NZS 2430.3:2004 series is intended to provide a consolidated approach to Hazardous Area Classification and more clearly indicate the approach of classification by assessment, or classification, by example. Minor changes are also made to the examples from the AS/NZS 2430.3:2004 series, as part of the ongoing revision of Standards.

The adoption of this Standard forms part of a strategic objective for adoption of all of the IEC 60079 series as Australia/New Zealand Standards.

As this Standard is reproduced from an International Standard, the following applies:

- (i) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (ii) A full point should be substituted for a comma when referring to a decimal marker.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a Standard, whereas an informative annex is only for information and guidance.

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