

AS/NZS 60079.10:2004  
(Incorporating Amendment No. 1)

AS/NZS 60079.10:2004

Australian/New Zealand Standard™

**Electrical apparatus for explosive gas  
atmospheres**

**Part 10: Classification of hazardous  
areas  
(IEC 60079-10:2002 MOD)**



#### **AS/NZS 60079.10:2004**

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.

---

The following are represented on Committee MS-011:

Auckland Regional Chamber of Commerce  
Australian Association of Certification Bodies  
Australian Chamber of Commerce and Industry  
Australian Industry Group  
Australian Liquefied Petroleum Gas Association Limited  
Australian Paint Manufacturers Federation  
Certification Bodies (Australia)  
Department of Labour New Zealand  
Department of Natural Resources and Mines (Qld)  
Electricity Supply Association of Australia  
Gas Association of New Zealand Inc  
Institute of Electrical Inspectors  
Institute of Instrumentation and Control Australia  
Institution of Engineers Australia  
LPG Association of New Zealand (Inc)  
Ministry of Economic Development (New Zealand)  
National Electrical and Communications Association  
New Zealand Association of Marine, Aviation and Power Engineers  
New Zealand Oil Companies  
The Australian Gas Association  
The New Zealand Chemical Industry Council Inc  
Victorian WorkCover Authority  
WorkCover New South Wales

---

#### **Keeping Standards up-to-date**

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 Standards may also be withdrawn.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.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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.

---

*This Standard was issued in draft form for comment as DR 03567.*

---

**AS/NZS 60079.10:2004**  
(Incorporating Amendment No. 1)

**Australian/New Zealand Standard™**

## **Electrical apparatus for explosive gas atmospheres**

### **Part 10: Classification of hazardous areas (IEC 60079-10:2002 MOD)**

Originated in Australia as AS 1076.2—1977 and AS 2430.1—1981.  
Previous edition AS 2430.1—1987.  
Originated in New Zealand as NZS 6101.1:1988.  
AS 2430.1—1987 and NZS 6101.1:1988 jointly revised and  
redesignated as AS/NZS 60079.10:2004.  
Reissued incorporating Amendment No. 1 (March 2007).

#### **COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5977 7

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MS-011, Classification of Hazardous Areas to supersede AS 2430.1—1987 and NZS 6101.1:1988, *Classification of hazardous areas, Part 1: Flammable gas and vapour atmospheres*.

*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 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 electrical apparatus for use in such hazardous areas. This Standard is for the use of manufacturers and installers of electrical equipment as well as by electrical inspecting authorities.

This Standard is an adoption with national modifications and has been reproduced from, IEC 60079-10:2002, *Electrical apparatus for explosive gas atmospheres—Part 10: Classification of hazardous areas*; it has been varied as indicated, for the protection of human health and safety, a legitimate reason under the WTO Agreement on Technical Barriers to Trade (TBT).

Variations to IEC 60079-10:2002 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**).

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

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘this international standard’ should read ‘this Australian/New Zealand Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.
- (d) Any French text on figures should be ignored.

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.

## CONTENTS

	<i>Page</i>
Introduction .....	iv
1 General.....	1
1.1 Scope .....	1
1.2 Normative references.....	2
2 Definitions and terms .....	2
3 Safety and area classification .....	6
3.1 Safety principles .....	6
3.2 Area classification objectives .....	6
4 Area classification procedure .....	7
4.1 General.....	7
4.2 Sources of release .....	8
4.3 Type of zone.....	8
4.4 Extent of zone.....	8
4.4.1 Release rate of gas or vapour .....	9
4.4.2 Lower explosive limit ( <i>LEL</i> ) .....	10
4.4.3 Ventilation.....	10
4.4.4 Relative density of the gas or vapour when it is released .....	10
4.4.5 Other parameters to be considered .....	10
4.4.6 Illustrative examples .....	11
5 Ventilation.....	11
5.1 General.....	11
5.2 Main types of ventilation .....	12
5.3 Degree of ventilation .....	12
5.4 Availability of ventilation .....	12
6 Documentation.....	12
6.1 General.....	12
6.2 Drawings, data sheets and tables .....	12
Annex A (informative) Examples of sources of release .....	14
Annex B (informative) Ventilation .....	16
Annex C (informative) Examples of hazardous area classification.....	32
Figure C.1 – Preferred symbols for hazardous area zones.....	53
Figure C.2 – Schematic approach to the classification of hazardous areas .....	54

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-