

Australian/New Zealand Standard™

Explosive atmospheres

**Part 26: Equipment with Equipment
Protection Level (EPL) Ga**



AS/NZS 60079.26:2015

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Equipment for Explosive Atmospheres. It was approved on behalf of the Council of Standards Australia on 20 October 2015 and on behalf of the Council of Standards New Zealand on 22 October 2015.
This Standard was published on 17 December 2015.

The following are represented on Committee EL-014:

Auckland Regional Chamber of Commerce
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Australian Pipeline and Gas Association
Aviation and Marine Engineers Association
Bureau of Steel Manufacturers of Australia
Department of Natural Resources and Mines, Qld
Department of Trade and Investment, NSW
Electrical Compliance Testing Association
Electrical Contractors Association of New Zealand
Electrical Regulatory Authorities Council
Engineers Australia
Institute of Electrical Inspectors
Institute of Instrumentation, Control & Automation Australia
Institution of Professional Engineers New Zealand
Mining Electrical and Mining Mechanical Engineering Society
Ministry of Business, Innovation and Employment, New Zealand
University of Newcastle
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 Standards may also be withdrawn.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.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

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 AS/NZS 60079.26:2015.

Australian/New Zealand Standard™

Explosive atmospheres

Part 26: Equipment with Equipment Protection Level (EPL) Ga

Originated as AS/NZS 60079.26(Int):2005.
Previous edition AS/NZS 60079.26:2007.
Third edition 2015.

COPYRIGHT

© Standards Australia Limited/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, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 1 76035 346 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Equipment for Explosive Atmospheres, to supersede AS/NZS 60079.26:2007.

The objective of this Standard is to set out the requirements for construction, test and marking for electrical equipment that provides Equipment Protection Level (EPL) Ga when single standardised Types of Protection (e.g. Ex 'ia', Ex 'ma', Ex 'da') cannot be applied. This Standard also applies to equipment mounted across a boundary where different Equipment Protection Levels may be required.

This Standard is identical with, and has been reproduced from IEC 60079-26 Ed.3.0 (2014), *Explosive atmospheres, Part 26: Equipment with Equipment Protection Level (EPL) Ga*. Changes to the Standard introduced by this edition are listed in the IEC Foreword.

This Standard is to be read in conjunction with AS/NZS 60079.0, *Explosive atmospheres, Part 0: Equipment—General requirements*.

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

- (a) In the source text 'this part of IEC 60079' should read 'this Australian/New Zealand Standard'.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
IEC		AS/NZS	
60079	Explosive atmospheres	60079	Explosive atmospheres
60079-0	Part 0: General requirements	60079.0	Part 0: General requirements
60079-1	Part 1: Equipment protection by flameproof enclosures "d"	60079.1	Part 1: Equipment protection by flameproof enclosures 'd'
60079-11	Part 11: Equipment protection by intrinsic safety "i"	60079.11	Part 11: Equipment protection by intrinsic safety 'i'
60529	Degrees of protection provided by enclosures (IP Code)	60529	Degrees of protection provided by enclosures (IP Code)
60695	Fire hazard testing	60695	Fire hazard testing
60695-11-10	Part 11-10: Test flames—50 W horizontal and vertical flame test methods	60695.11.10	Part 11-10: Test flames—50 W horizontal and vertical flame test methods

CONTENTS

1	Scope.....	6
2	Normative references.....	6
3	Terms and definitions	7
4	Requirements for design and construction.....	7
4.1	Protection measures against ignition hazards of the electrical circuits	7
4.1.1	General	7
4.1.2	Application of two independent Types of Protection providing EPL Gb.....	7
4.1.3	Application of a Type of Protection providing EPL Gb and a separation element	8
4.2	Equipment with moving parts	12
4.2.1	Frictional heating	12
4.2.2	Damage arising from failure of moving parts	12
4.2.3	Light metals	12
4.3	Process connection	13
5	Type tests	13
5.1	Standardized types of protection	13
5.2	Separation elements	13
5.3	Temperature evaluation.....	13
6	Marking	14
6.1	General.....	14
6.2	Examples of marking	14
7	Instructions.....	14
7.1	Separation elements:	14
7.2	Process connection:	15
7.3	EPL allocation.....	15
	Bibliography	16
	Figure 1 – Example of a partition wall with a conductor bushing considered as gas diffusion tight.....	9
	Figure 2 – Example of a separation element with a cylindrical shaft joint and naturalventilation	12
	Table 1 – Separation elements.....	11

IEC FOREWORD

This edition includes the following significant changes with respect to the previous edition:

Changes	Clause	Type		
		Minor and editorial changes	Extension	Major technical changes
Notes deleted	1	X		
Reference to associated apparatus deleted	1	X		
Additional normative references included	3	X		
Requirements against mechanical and electrostatic ignition hazards deleted (now covered in IEC 60079-0)	4.1	X		
Requirement for separation element detailed regarding external influences	4.1.3.2	X		
Intrinsic safety Ex ia as single type of protection including associated apparatus deleted (now covered by EPL)	4.2.2 (ed.2)	X		
Encapsulation Ex ma as single type of protection deleted (now covered by EPL)	4.2.3 (ed.2)	X		
Conditions a) and b) linked with an "and", therefore requirement of "flameproof joint" deleted in following clause. Both requirements already covered by separation elements and standardised process connections.	4.3	X		
Process connection requires a sufficiently tight joint: IP66 added alternatively to IP67	4.3		X	
Requirement for isolated conductive components deleted (now covered in IEC 60079-0)	4.4 (ed.2)	X		
Requirements for non-conductive enclosures deleted (now covered in IEC 60079-0)	4.5 (ed.2)	X		
Test of partition walls according to 4.1.3.2 b) is specified in more detail	5.2			C1
Marking example for associated apparatus deleted	6.2 b)	X		
Note 3 with an additional example added	6.2	X		
Specification of material of partition wall required in instructions (also required in 4.1.3.2)	7	X		
Alternative risk assessment method deleted (is now generally introduced)	AnnexA (ed.2)	X		

NOTE The technical changes referred to include the significance of technical changes in the revised IEC Standard, but they do not form an exhaustive list of all modifications from the previous version.

Explanation of the types of changes:

A) Definitions

1) Minor and editorial changes:

- Clarification
- Decrease of technical requirements
- Minor technical change
- Editorial corrections

These are changes which modify requirements in an editorial or a minor technical way. They include changes of the wording to clarify technical requirements without any technical change, or a reduction in level of existing requirement.

2) Extension: Addition of technical options

These are changes which add new or modify existing technical requirements, in a way that new options are given, but without increasing requirements for equipment that was fully compliant with the previous standard. Therefore, these will not have to be considered for products in conformity with the preceding edition.

3) Major technical changes:

- addition of technical requirements
- increase of technical requirements

These are changes to technical requirements (addition, increase of the level or removal) made in a way that a product in conformity with the preceding edition will not always be able to fulfil the requirements given in the later edition. These changes have to be considered for products in conformity with the preceding edition. For these changes additional information is provided in Clause B below.

NOTE These changes represent current technological knowledge. However, these changes should not normally have an influence on equipment already placed on the market.

B) Information about the background of 'Major technical changes'

C1: Introduction of type tests for separation elements according to "4.1.3.2 b)"

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

AS/NZS 60079.26 : 2015 : EN PDF

-
- ⊙ Looking for additional Standards? Visit SAI Global Infostore
 - ⊙ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-

Need to speak with a Customer Service Representative - Contact Us