AS/NZS 60079.26:2007
IEC 60079-26, Ed. 2.0 (2006)

AS/NZS 60079.26:2007

Australian/New Zealand Standard™

Explosive atmospheres

Part 26: Equipment with equipment protection level (EPL) Ga

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 19 March 2007 and on behalf of the Council of Standards New Zealand on 6 April 2007.
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The following are represented on Committee EL-014:

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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 06716.

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Explosive atmospheres

Part 26: Equipment with equipment protection level (EPL) Ga

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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(Int):2005.

The objective of this Standard is to specify the particular requirements for construction, test and marking for electrical equipment, that provides equipment protection level (EPL) Ga.

This Standard is identical with, and has been reproduced from IEC 60079-26, Ed. 2.0 (2006), *Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga*.

One footnote (identified by shading) was included on Page 3 to clarify a typographical error in the original IEC Standard.

Another footnote (identified by shading) was included on Page 4 to provide further information about partition walls (Clause 4.2.5.2).

The significant changes with respect to the previous edition are—

(a) changes concerning the accessible chargeable surfaces of the equipment;

(b) requirements for a partition wall combined with an air-gap with natural ventilation;

(c) introduction of equipment protection levels (EPL) and substitution of the references to zones (see explanation in Annex A);

(d) change of heading from ‘Mechanical connection’ to ‘Process connection’ together with a clarification of requirement for any release from Zone 0 of explosive gas atmospheres.

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) In the source text ‘IEC 60079-26’ should read ‘AS/NZS 60079.26’.

(iii) 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.

CONTENTS

NOTES

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Explosive atmospheres
Part 26: Equipment with equipment protection level (EPL) Ga

1 Scope

This part of IEC 60079 specifies the particular requirements for construction, test and marking for electrical equipment that provides equipment protection level (EPL) Ga. This electrical equipment, within the operational parameters specified by the manufacturer, ensures a very high level of protection that includes rare faults related to the equipment or two faults occurring independently of each other.

NOTE 1 A malfunction may result from a failure of the component parts of the electrical equipment or from anticipated externally applied influences. Two independent malfunctions which may occur more frequently and which, separately, would not create an ignition hazard but which, in combination, could create a potential ignition hazard, should be regarded as occurring together to form a rare fault.

NOTE 2 This electrical equipment is intended for use in zone 0 hazardous areas, in which explosive gas atmospheres caused by mixtures of air and gases, vapours or mists under normal atmospheric conditions are present continuously, for long periods or frequently.

This standard also applies to equipment mounted across a boundary where different protection levels may be required.

EXAMPLE: In the wall of a storage vessel containing zone 0 with an ambient defined as zone 1.

This standard also applies to equipment installed in an area requiring a lower protection level, but electrically connected to equipment with equipment protection level (EPL) Ga (associated apparatus).

This standard supplements the general requirements in IEC 60079-0 and the requirements of the standardized types of protection, in accordance with the IEC 60079 series, to adapt the level of safety provided by those standards in order to provide EPL Ga.

NOTE 3 In designing equipment for operation in explosive gas atmospheres under conditions other than the atmospheric conditions given in IEC 60079-0, this standard may be used as a guide. However, additional testing is recommended related specifically to the intended conditions of use. This is particularly important when the types of protection 'Flameproof enclosures' (IEC 60079-1) and 'Intrinsic safety' (IEC 60079-11) are applied.

NOTE 4 The classification of hazardous areas in zones is defined in IEC 60079-10.

NOTE 5 There may be other non-electrical sources of ignition (for example ultrasonic, optical or ionizing radiation) that are not addressed by this standard; these should also be taken into consideration (see, for example, EN 1127-1).

NOTE 6 This concept provides equipment protection level (EPL) Ga. For further information, see Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

~~IEC 60079-0:2004, *Electrical apparatus for explosive gas atmospheres – Part 0: General requirements*~~

AS/NZS 60079.0, *Electrical apparatus for explosive gas atmospheres,* Part 0: *General requirements* (identical to IEC 60079-0)