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Interim
Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Interim Standard was prepared by Joint Technical Committee EL-014, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 8 April 2005 and on behalf of the Council of Standards New Zealand on 15 April 2005.
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The following are represented on Committee EL-014:

Auckland Regional Chamber of Commerce
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Australian Institute of Petroleum Ltd
Certification Interests (Australia)
Department of Natural Resources and Mines (Qld)
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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.

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Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus

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PREFACE

This Interim Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Electrical Equipment in Hazardous Areas.

This Interim Standard is identical with, and has been reproduced from IEC 60079-26, Ed. 1.0 (2004), *Electrical apparatus for explosive gas atmospheres - Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus*.

The objective of this Interim Standard is to specify the particular requirements for construction, test and marking for electrical apparatus of Group II, intended for use in Zone 0 as defined in AS/NZS 60079.10.

This Interim Standard supplements the general requirements in AS/NZS 60079.0 and the requirements of the standardized types of protection, in accordance with the AS/NZS 60079 Series, to adapt the level of safety provided by those Standards to the very high level of risk in Zone 0.

As this Interim 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 Interim Australia/New Zealand Standard’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

Standards Australia and Standards New Zealand invite comment on this Interim Standard from persons and organizations concerned with this subject. The closing date for comment is 18 months after publication at which time the Committee will either consider its withdrawal at the end of its two years life, extend its life for another 2 years or revise it in the light of public comment, with the view to the publication of a Joint Australian/New Zealand Standard before the expiry date.

During the life of this document the Committee will monitor all comment as it is received.

Attention is drawn to the fact that this document is an Interim Joint Australian/New Zealand Standard only and should be regarded as a development Standard and liable to future alteration.

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Interim Australian/New Zealand Standard

Electrical apparatus for explosive gas atmospheres Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus

1 Scope

This part of IEC 60079 specifies the particular requirements for construction, test and marking for electrical apparatus of Group II intended for use in Zone 0 as defined in IEC 60079-10.

This electrical apparatus, within the operational parameters specified by the manufacturer, ensures a very high level of protection that includes rare faults related to the apparatus or two faults occurring independently of each other.

NOTE 1 A malfunction may result from a failure of the component parts of the electrical apparatus 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.

This electrical apparatus 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 apparatus mounted across the boundary between Zone 0 and Zone 1.

EXAMPLE: In the wall of a storage vessel.

This standard also applies to apparatus installed outside Zone 0, but electrically connected to apparatus inside Zone 0 (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 to the very high level of risk in Zone 0.

NOTE 2 In designing apparatus 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 enclosure' (IEC 60079-1) and 'Intrinsic safety' (IEC 60079-11) are applied.

NOTE 3 The classification of hazardous areas in zones is defined in IEC 60079-10.

NOTE 4 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).

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 identical Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading.

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

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