AS/NZS 60079.0:2005
IEC 60079-0, Ed.4.0 (2004)
(Incorporating Amendment No. 1)

AS/NZS 60079.0:2005

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Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 0: General requirements

STANDARDS AUSTRALIA

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This Joint Australian/New Zealand 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)
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Part 0: General requirements

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Electrical Equipment in Hazardous Areas, to supersede AS/NZS 60079.0:2000.

*This Standard incorporates Amendment No. 1 (*June 2005*). 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.*

This Standard is identical with, and has been reproduced from, IEC 60079-0, Ed.4.0(2004), *Electrical apparatus for explosive gas atmospheres - Part 0: General requirements*.

The objective of this Standard is to provide general requirements for the manufacturers, testing authorities and certification bodies concerned with electrical apparatus for explosive gas atmospheres.

This Standard will run concurrently with AS 2380.1 *Electrical equipment for explosive atmospheres—Explosion-protection techniques,* Part 1: *General requirements*, until the AS/NZS 60079 series is complete at which time the AS 2380 series will be withdrawn.

The significant changes with respect to the previous edition are listed below:

(a) Standard atmospheric conditions re-introduced.

(b) All requirements for third-party certification removed.

(c) New type of protection ‘n’ introduced.

(d) New apparatus standards for caplights, intrinsically safe systems, Zone 0 apparatus, and trace heating introduced.

(e) Clarification of the status of symbol ‘s’.

(f) Definitions for symbols ‘U’ and ‘X’ revised to align with current usage.

(g) Definition for Ex component transferred from IEC 60079-18.

(h) New definitions drafted for ‘energy limited’ parameters to allow common usage by types of protection ‘i’ and ‘n’.

(i) New definitions for batteries transferred from IEC 60079-7.

(j) Definition added for ambient temperature.

(k) Definition added for continuous operating temperature (COT).

(l) Definition for certificate transferred from IEC 60079-15 and revised based on ISO /IEC 17000.

(m) Definition added for cable gland.

(n) Clause 5 for temperature re-written to address the influences of ambient temperature, internal sources of heat, and external sources of heating or cooling.

(o) Small component ignition test transferred from IEC 60079-11 and IEC 60079-15.

(p) Requirements for bonding transferred from IEC 60079-7 and IEC 60079-15.

(q) Requirements for gasket retention transferred from IEC 60079-15 for wider applicability.

(r) Relative thermal index (RTI) added as an alternative to thermal index (TI).

(s) Electrostatic requirements transferred and rationalized from IEC 60079-15 and IEC 60079-26 to apply to all of Group I and Group II.

(t) Introduction of two additional test methods to evaluate the use of non-metallic materials with respect to the storage of electrostatic charges.

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(u) Light metal requirements transferred and rationalized from IEC 60079-15 and IEC 60079-26 to apply to all of Group I and Group II.

(v) Introduction of a test to evaluate the use of a non-metallic enclosure wall in an earth bonding connection.

(w) Clause 16 rewritten to align with industry usage of the terms *cable gland* and *conduit entry*.

(x) Equipotential bonding requirements for machines transferred from IEC 60079-7 and IEC 60079-15.

(y) Requirement for disconnectors in switchgear and luminaires revised to provide IP20 protection for live parts and include additional marking.

(z) General requirements for cells and batteries transferred from IEC 60079-7 and IEC 60079-15.

(aa) Impact test revised to specify drop height in lieu of energy.

(bb) Clarification of application of 5°C and 10°C temperature margins to type-tested samples.

(cc) Clarification of order of tests for metallic materials.

(dd) Clarification of number of samples and order of tests for non-metallic materials.

(ee) Clarification of order of marking.

(ff) Clarification of marking details for associated apparatus.

(gg) Clarification of marking of specific gases.

(hh) Clarification of marking of temperature class.

(ii) Clarification of usage of compulsory certificate number.

(jj) Clarification of marking of small apparatus.

(kk) Compilation of all warning markings into a table.

(ll) Clarification of marking examples.

(mm) Addition of a Clause on instructions.

(nn) Deletion of Annex A as information is available in more appropriate standards (IEC 60079-20).

(oo) Revision and clarification of Annex A (previously Annex B) to accommodate term *cable gland.*

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(ii) In the source text ‘this International Standard’ should read ‘this Australia/New Zealand Standard’.

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