

AS/NZS 4641(Int):2005
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AS/NZS 4641 (Int):2005

Interim
Australian/New Zealand Standard™

**Electrical apparatus for detection of
oxygen and other gases and vapours at
toxic levels—General requirements and
test methods**

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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 3 March 2005 and on behalf of the Council of Standards New Zealand on 11 March 2005. This Interim Standard was published on 29 March 2005.

The following are represented on Committee EL-014:

Auckland Regional Chamber of Commerce
Australian Association of Certification Bodies
Australian Chamber of Commerce and Industry
Australian Gas Association
Australian Industry Group
Australian Liquefied Petroleum Gas Association
Australian Paint Manufacturers Federation
Department of Labour New Zealand
Department of Natural Resources and Mines (Qld)
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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.

The objective of this Interim Standard is to provide general requirements and test methods for manufacturers, testing authorities and certifying bodies concerned with electrical apparatus for the measurement of the concentration of oxygen and toxic levels of gases and vapours.

The terms 'normative' and 'informative' are used to define the application of the appendix to which they apply. A normative appendix is an integral part of a standard, whereas an informative appendix is only for information and guidance.

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.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 REFERENCED DOCUMENTS	4
1.3 DEFINITIONS	4
1.4 GENERAL	9
SECTION 2 REQUIREMENTS PRIOR TO TESTING	
SECTION 3 PERFORMANCE TESTS	
3.1 UNPOWERED STORAGE	12
3.2 STANDARD TEST GAS	12
3.3 FLOW RATE FOR TEST GASES	12
3.4 INITIAL CALIBRATION	12
3.5 CALIBRATION CURVE (LINEARITY TEST)	12
3.6 STABILITY	13
3.7 ALARMS	14
3.8 TEMPERATURE VARIATION TEST.....	14
3.9 PRESSURE	15
3.10 HUMIDITY	15
3.11 AIR VELOCITY	15
3.12 FLOW RATE	16
3.13 ORIENTATION	16
3.14 VIBRATION	16
3.15 DROP TEST FOR PORTABLE AND TRANSPORTABLE APPARATUS.....	16
3.16 WARM-UP TIME	17
3.17 TIME OF RESPONSE.....	17
3.18 RECOVERY TIME	17
3.19 MINIMUM TIME TO OPERATE (SPOT-READING APPARATUS).....	18
3.20 HIGH GAS CONCENTRATION OPERATION ABOVE THE MEASURING RANGE (NOT APPLICABLE TO 100% RANGE).....	18
3.21 BATTERY CAPACITY FOR BATTERY-POWERED PORTABLE CONTINUOUS DUTY APPARATUS	18
3.22 POWER SUPPLY VARIATION TEST.....	19
3.23 POWER SUPPLY INTERRUPTIONS	19
3.24 ADDITION OF SAMPLING PROBE	19
3.25 EFFECT OF OTHER GASES/CROSS SENSITIVITY	20
SECTION 4 FIELD CALIBRATION KIT	
APPENDICES	
A EVALUATION OXYGEN GAS MONITOR WORKSHEET	22
B EVALUATION GAS MONITOR WORKSHEET.....	23

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Interim Standard applies to gas detection instruments used to measure the concentration of oxygen and toxic levels of gases and vapours.

It does not apply to gas detection instruments used to detect flammable gases and vapours at levels related to their lower flammability limits (LFL) and above. These instruments are covered by AS/NZS 61779.1.

Instruments that are within the scope of this Interim Standard and AS/NZS 61779.1 may be assessed and tested to either Standard.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Interim Standard:

AS/NZS

60079	Electric apparatus for explosive gas atmospheres
60079.20	Part 20: Data for flammable gases and vapours, relating to the use of electrical apparatus
61779	Electrical apparatus for the detection and measurement of flammable gases
61779.1	Part 1: General requirements and test methods
IEC	
60077 (all parts)	Railway applications—Electric equipment for rolling stock
61000	Electromagnetic compatibility (EMC)
61000-4-4	Part 4-4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test.

1.3 DEFINITIONS

For the purpose of this Interim Standard the following definitions apply:

1.3.1 Gas properties**1.3.1.1 Ambient air**

Normal atmosphere surrounding the apparatus.

1.3.1.2 Clean air

Air that is free of flammable gases and interfering or contaminating substances.

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