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Australian/New Zealand Standard™

Explosive atmospheres

Part 20.1: Material characteristics for gas and vapour classification—Test methods and data

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MS-011, Classification of Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 14 February 2012 and on behalf of the Council of Standards New Zealand on 31 January 2012.
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This Standard was issued in draft form for comment as DR AS/NZS 60079.20.1.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MS-011, Classification of Hazardous Areas.

This Standard forms the first edition of AS/NZS 60079.20.1 and it is intended to replace AS/NZS 60079.1.1:2002, *Electrical apparatus for explosive gas atmospheres—Flameproof enclosures 'd'—Method of test for ascertainment of maximum experimental safe gap,* AS/NZS 60079.4:2000 *Electrical apparatus for explosive gas atmospheres—Method of test for ignition temperature,* AS/NZS 60079.12:2000, *Electrical apparatus for explosive gas atmospheres—Classification of mixtures of gases or vapours with air according to their maximum experimental safe gaps and minimum igniting currents,* AS/NZS 60079.20:2000, *Electrical apparatus for explosive gas atmospheres—Data for flammable gases and vapours, relating to the use of electrical apparatus,* and its Amendment 1.

The objective of this Standard is to provide guidance on classification of gases and vapours. It describes a test method intended for the measurement of the maximum experimental safe gaps (MESG) for gas or vapour-air mixtures under normal conditions of temperature and pressure so as to permit the selection of an appropriate group of equipment. It describes also a test method intended for use in the determination of the auto-ignition temperature of a chemically pure vapour or gas in air at atmospheric pressure.

The tabulated values of chemical and engineering properties of substances are provided to assist engineers in their selection of equipment to be used in hazardous areas.

This Standard is identical with, and has been reproduced from IEC 60079-20-1, Ed.1.0 (2010), *Explosive atmospheres*—Part 20-1: *Material characteristics for gas and vapour classification—Test methods and data.*

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Reference to International Standard		*Australian/New Zealand Standard*	
IEC		AS/NZS	
60079	Explosive atmospheres	60079	Explosive atmospheres
60079-11	Part 11: Equipment protection by intrinsic safety "i"	60079.11	Part 11: Equipment protection by intrinsic safety 'i'
60079-14	Part 14: Electrical installations design, selection and erection	60079.14	Part 14: Electrical installations design, selection and erection

The terms 'normative' and 'informative' have been used in this Standard 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.

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