

Australian/New Zealand Standard™

**Electrical apparatus for explosive gas
atmospheres
Part 6: Oil-immersion 'o'**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/14, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 9 March 2000 and on behalf of the Council of Standards New Zealand on 20 March 2000. It was published on 20 April 2000.

The following are represented on Committee EL/14:

Association of Consulting Engineers Australia
Auckland Regional Chamber of Commerce
Australian Association of Certification Bodies
Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
Australian Gas Association
Australian Industry Group
Australian Institute of Petroleum
Australian Institute of Refrigeration Air Conditioning and Heating
Department of Mineral Resources, N.S.W.
Department of Mines and Energy, Qld
Electricity Supply Association of Australia
Institute of Electrical Inspectors
Institute of Instrumentation and Control Australia
Institution of Engineers Australia
Ministry of Commerce New Zealand
National Electrical and Communications Association
New Zealand Association of Marine, Aviation and Power Engineers
New Zealand Employers and Manufacturers Association
New Zealand Hazardous Areas Electrical Coordinating Committee
Regulatory authorities (electrical)
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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 International or Standards New Zealand at the address shown on the back cover.

AS/NZS 60079.6:2000
(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 6: Oil-immersion 'o'

First published as AS/NZS 60079.6:2000.
Reissued incorporating Amendment No. 1 (December 2003).

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 3341 7

PREFACE

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

This Standard incorporates Amendment No. 1 (December 2003). 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 60079-6:1995, *Electrical apparatus for explosive gas atmospheres, Part 6: Oil-immersion "o"*

The objective of this Standard is to set out the requirements for the design, construction and testing of electrical apparatus (also parts of electrical apparatus and Ex components) using oil-immersion protection technique.

A1

As this Standard is reproduced from an International Standard a full point should be substituted for a comma when referring to a decimal marker.

CONTENTS

	<i>Page</i>
Clause	
1 Scope.....	1
2 Normative references	1
3 Definitions	2
4 Constructional requirements.....	2
5 Verifications and tests	5
5.1 Type tests	5
5.2 Routine tests	5
6 Marking	5

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
**Electrical apparatus for explosive gas atmospheres
Part 6: Oil-immersion 'o'**

1 Scope

1.1 This part of AS/NZS 60079 specifies the requirements for the construction and testing of oil-immersed electrical apparatus, oil-immersed parts of electrical apparatus and Ex components in the type of protection 'o', intended for use in potentially explosive atmospheres of gas, vapour and mist.

1.2 This standard supplements IEC 60079-0, the requirements of which apply to oil-immersed electrical apparatus.

1.3 This standard is applicable to electrical apparatus and parts of electrical apparatus which are not ignition capable in normal operation. Compliance of the electrical apparatus is to be assessed against IEC 60079-15 except for those parts designed to comply with IEC 60079-11.

NOTE - This standard assumes that the electrical apparatus immersed in the protective liquid is fixed in its operating position in accordance with the installation instructions.

2 Normative references

A1 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.

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

IEC 60079-7, *Electrical apparatus for explosive gas atmospheres—Part 7: Increased safety "e"*

IEC 60079-11, *Electrical apparatus for explosive gas atmospheres—Part 11: Intrinsic safety "i"*

IEC 60079-15, *Electrical apparatus for explosive gas atmospheres—Part 15: Electrical apparatus with type of protection "n"*

IEC 60156, *Method for the determination of the electric strength of insulating oils*

IEC 60247, *Measurement of relative permittivity, dielectric dissipation factor and d.c. resistivity of insulating liquids*

IEC 60296, *Specification for unused mineral insulating oils for transformers and switchgear*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60588-2, *Askarels for transformers and capacitors—Part 2: Test methods*