

AS/NZS 61241.2.1:2000
IEC 61241-2-1:1994

Australian/New Zealand Standard™

**Electrical apparatus for use in the
presence of combustible dust**

**Part 2.1: Test methods—Methods for
determining the minimum ignition
temperatures of dust**

AS/NZS 61241.2.1:2000

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 3 December 1999 and on behalf of the Council of Standards New Zealand on 22 November 1999. It was published on 3 February 2000.

The following interests 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 Standards may also be withdrawn.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.standard.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 61241.2.1:2000

Australian/New Zealand Standard™

Electrical apparatus for use in the presence of combustible dust

Part 2.1: Test methods—Methods for determining the minimum ignition temperatures of dust

First published as AS/NZS 61241.2.1:2000.

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, PO Box 1055, Strathfield, NSW 2135 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 2950 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/14, Electrical Equipment in Hazardous Areas.

This Standard is identical with and has been reproduced from, IEC 61241-2-1:1994, *Electrical apparatus for use in the presence of combustible dust*, Part 2: *Test methods*, Section 1: *Methods for determining the minimum ignition temperatures of dust*.

The objective of this Standard is to provide testing authorities and certifying bodies with test methods to determine the minimum ignition temperatures of dust layers and clouds, so as to allow the proper selection of adequate electrical apparatus to be used in areas where combustible dusts are or may be present.

In January 1997, the IEC commenced numbering its Standards from 60000 by adding 60000 to the number of each existing Standard. This coordinates IEC numbering with ISO numbering. During the transition period an IEC Standard might be identified by its new number or its old number (for example, IEC 60050 or IEC 50).

This Standard is part of a series covering electrical apparatus for use in the presence of combustible dust which comprises the following:

AS/NZS

- | | |
|-----------|---|
| 61241 | Electrical apparatus for use in the presence of combustible dust |
| 61241.1.1 | Part 1.1: Electrical apparatus protected by enclosures and surface temperature limitation—Specification for apparatus |
| 61241.1.2 | Part 1.2: Electrical apparatus protected by enclosures and surface temperature limitation—Selection, installation and maintenance |
| 61241.2.1 | Part 2.1: Test methods—Methods for determining the minimum ignition temperatures of dust (this Standard) |
| 61241.2.2 | Part 2.2: Test methods—Method for determining the electrical resistivity of dust in layers |
| 61241.2.3 | Part 2.3: Test methods—Method for determining minimum ignition energy of dust/air mixtures |
| 61241.3 | Part 3: Classification of areas where combustible dusts are or may be present. |

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

The term 'normative' has been used in this Standard to define the application of the annex to which it applies. A 'normative' annex is an integral part of a Standard.

CONTENTS

	<i>Page</i>
Introduction.....	iv
Clause	
1 Scope.....	1
2 Normative references	1
3 Definitions.....	2
4 Method A: Dust layer on a heated surface at a constant temperature	2
4.1 Preparation of dust sample.....	2
4.2 Test apparatus.....	2
4.3 Procedure.....	4
4.4 Test acceptance criteria.....	6
4.5 Reporting of results	6
4.6 Application of results	6
5 Method B: Dust cloud in a furnace at a constant temperature	7
5.1 Preparation of dust sample.....	7
5.2 Test apparatus.....	7
5.3 Procedure.....	7
5.4 Criterion of ignition	8
5.5 Minimum ignition temperature of a dust cloud.....	8
5.6 Reporting of results	8
Figures A.1 - A.5	10
Figures B.1 - B.10.....	16
Annexes	
A Method A - Construction of a heated surface and measurement of temperature distribution on the surface	9
B Construction of a constant temperature furnace	15

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-