

AS 4436—1996  
IEC 815:1986

Australian Standard<sup>®</sup>

---

**Guide for the selection of insulators  
in respect of polluted conditions**

---

This Australian Standard was prepared by Committee EL/10, Overhead Lines. It was approved on behalf of the Council of Standards Australia on 27 September 1996 and published on 5 December 1996.

---

The following interests are represented on Committee EL/10:

- Australasian Railway Association
  - Australian Chamber of Commerce and Industry
  - Australian Electrical and Electronic Manufacturers Association
  - Australian Porcelain Insulators Association
  - Electricity Engineers Association of New Zealand
  - Electricity Supply Association of Australia
- 

**Review of Australian Standards.** *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

*Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.*

*Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.*

---

*This Standard was issued in draft form for comment as DR 96250.*

AS 4436—1996

Australian Standard<sup>®</sup>

---

**Guide for the selection of insulators  
in respect of polluted conditions**

---

PUBLISHED BY STANDARDS AUSTRALIA  
(STANDARDS ASSOCIATION OF AUSTRALIA)  
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7337 0808 0

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/10 on Overhead Lines.

The objective of this Standard is to give general rules, based on experience in service and tests in naturally and artificially polluted conditions, that help in choosing insulators that give satisfactory performance under polluted conditions.

This Standard is the result of a consensus among Australian and New Zealand representatives to produce it as an Australian Standard.

This Standard is identical with and has been reproduced from IEC 815:1986, *Guide for the selection of insulators in respect of polluted conditions*.

Users of this Standard are advised by Standards Australia, under arrangements made with ISO and IEC, and certain other Standards organizations, that the number of this Standard is not reproduced on each page, its identity is shown only on the cover and title pages.

For the purpose of this Australian Standard the source text should be modified as follows:

- (a) The words 'this Australian Standard' should replace 'this International Standard' wherever they appear.
- (b) References to international Standards should be replaced by references to the following equivalent Australian Standards:

<i>References to International Standard</i>		<i>Australian Standard</i>	
IEC		AS	
71	Insulation co-ordination	1824	Insulation coordination
71-2	Part 2: Application guide	1824.2	Part 2: Application guide
273	Characteristics of indoor and outdoor post insulators for systems with nominal voltages greater than 1000 V	1137	Insulators
		1137.3	Part 3: Porcelain and glass indoor and outdoor station post insulators (for voltages greater than 1000 V a.c.)
305	Insulators for overhead lines with a nominal voltage above 1000 V—Ceramic or glass insulators for a.c. systems—Characteristics of insulator units of the cap and pin type	2947	Insulators—Porcelain and glass for overhead power lines—Voltages greater than 1000 V a.c.
		2947.2	Part 2: Characteristics
433	Characteristics of string insulator units of the long rod type	2947	Insulators—Porcelain and glass for overhead power lines—Voltages greater than 1000 V a.c.
		2947.2	Part 2: Characteristics
507	Artificial pollution tests on high-voltage insulators to be used on a.c. systems	—	
720	Characteristics of line post insulators	2947	Insulators—Porcelain and glass for overhead power lines—Voltages greater than 1000 V a.c.
		2947.2	Part 2: Characteristics

## CONTENTS

Clause	<i>Page</i>
1. Scope . . . . .	1
2. Object . . . . .	1
3. Pollution severity levels . . . . .	3
4. Relation between the pollution level and the specific creepage distance . . . . .	4
5. Application of the “specific creepage distance” concept . . . . .	4
5.1 Parameters characterizing the profile . . . . .	5
5.2 Influence of the position of insulators . . . . .	5
5.3 Influence of the diameter . . . . .	5
6. Determination of the creepage distance . . . . .	6
7. Evaluation of pollution severity . . . . .	6
APPENDIX A — Example of a questionnaire to collect information on the behaviour of insulators in polluted areas . . . . .	8
APPENDIX B — Greasing and washing . . . . .	10
APPENDIX C — Relation between pollution levels and artificial pollution tests . . . . .	12
APPENDIX D — Parameters characterizing the insulator profile . . . . .	13

(PAGE iv IN THE HARD COPY IS BLANK.)

First published as AS 4436— 1996.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

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](#)
-