

AS 2802—1992

Australian Standard[®]

Electric cables—Reeling and trailing—For mining and general use (other than underground coal mining)

This Australian Standard was prepared by Committee EL/3, Electric Wires and Cables. It was approved on behalf of the Council of Standards Australia on 3 December 1991 and published on 16 March 1992.

The following interests are represented on Committee EL/3:

Australian Electrical and Electronic Manufacturers Association
Department of Defence
Department of Minerals and Energy, New South Wales
Electrical Contractors Associations of Australia
Electrical regulatory authorities
Electricity Supply Association of Australia
Railways of Australia Committee
Testing interests

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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 90198.

AS 2802—1992

Australian Standard®

Electric cables—Reeling and trailing—For mining and general use (other than underground coal mining)

First published as Part of AS C81—1941.
Second edition 1950.
Third edition 1967.
Fourth edition 1973.
Revised and redesignated AS 1802—1976.
AS 1802—1976 withdrawn 1978.
AS 1802—1976 revised and redesignated in part as
AS 2802—1985.
Second edition 1992.

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

ISBN 0 7262 7243 4

PREFACE

This Standard was prepared by Standards Australia's Committee on Electric Wires and Cables.

The Standard specifies two classes of cables for reeling and trailing cables for mining and general use, and defines cable structures developed to satisfy particular industry requirements. For high voltage applications, cables with a rationalized range of conductor sizes are specified to provide an optimum range to meet most applications.

Improvements made in manufacturing techniques and quality control, together with availability of cable materials having improved electrical and mechanical properties, permit the production of a high class of cable.

The cables specified in this Standard have been designed to meet the special requirements of the Australian surface mining industry and also to comply with the requirements of AS 3007, *Electrical installations—Surface mines and associated processing plant*.

Although surface mining was a significant factor in determining the cables to be incorporated in this Standard, it is recognized that many of these cables will be equally applicable to other installations, e.g. underground metalliferous mines, ship loaders, travelling cranes, reclaimers at loading stations and other large materials handling plant.

A number of cables specified in this Standard may also meet the requirements for underground coal mines, however, reeling and trailing cables for coal mines are the subject of AS 1802, *Electric cables—Reeling and trailing—For underground coal mining purposes*.

This Standard differs from the 1985 edition in that Type 415 cable has been deleted due to lack of demand.

In the preparation of this Standard consideration was also given to the following publications and acknowledgment is made of the assistance received therefrom:

AEIC

No CS 6 *Ethylene propylene rubber insulated shielded power cables rated 5 through 69 kV*

ICEA

Pub No S-68-516 *Ethylene-propylene-rubber-insulated wire and cable for the transmission and (Nema Pub No WC8) distribution of electrical energy*.

© 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.

CONTENTS

	<i>Page</i>
FOREWORD	5
1 SCOPE	6
2 REFERENCED DOCUMENTS	6
3 DEFINITIONS	6
4 VOLTAGE DESIGNATION	7
5 CABLE CLASS, TYPE AND APPLICATION	8
6 MAXIMUM CONDUCTOR TEMPERATURE	8
7 POWER, EARTH AND PILOT CONDUCTORS (other than central pilot conductor and composite earth screens)	9
8 CENTRAL PILOT CORE (Types 409 and 441 only)	9
9 CONDUCTOR SCREEN	10
10 INSULATION OR COVERING ON CONDUCTORS (other than semi-conductive elastomer covering on earth conductors)	10
11 TAPE OVER INSULATION OR COVERING, OTHER THAN SEMICONDUCTIVE TAPE (Types 409, 412 and 440 only)	11
12 INSULATION SCREEN (non-metallic and composite)	11
13 SEMICONDUCTIVE TAPE OVER COMPOSITE SCREEN (Type 450 only)	14
14 IDENTIFICATION OF CORES	14
15 CRADLE SEPARATORS, CENTRE AND INTERSTITIAL FILLERS AND, FOR TYPES 441 AND 450, EARTH CONDUCTOR COVERING	15
16 LAYING UP OF CORES	16
17 TAPE OVER LAID-UP CORE ASSEMBLY (Type 450 only)	16
18 SEMICONDUCTIVE ELASTOMER SCREEN FOR CORE ASSEMBLY (Type 441 only) .	16
19 REINFORCEMENT FOR CORE ASSEMBLY SCREEN (Type 441 only)	17
20 INNER SHEATH (Type 412 only)	17
21 PLIABLE ARMOUR (Type 412 only)	17
22 OUTER SHEATH (all cables)	17
23 OUTER SHEATH REINFORCEMENT (Types 409, 412, 440 and 450 only)	19
24 CONSTRUCTION AND DIMENSIONS (all cables)	19
25 JOINTS IN COMPLETED CABLE LENGTHS	19
26 TESTS	22
27 FIGURES OF CONSTRUCTION AND TABLES OF DIMENSIONS	27
28 MARKING (all cables)	40
 TABLES	
1 TYPES OF CABLES	8
2 MAXIMUM CONDUCTOR TEMPERATURE	9
3 TESTS AND CRITERIA FOR INSULATION	12
4 CORE IDENTIFICATION METHOD	14
5 COLOURS AND ROTATIONAL SEQUENCE	15
6 TESTS AND CRITERIA FOR NON-CONDUCTIVE AND SEMICONDUCTIVE ELASTOMER, AS APPROPRIATE, FOR FILLERS, CRADLE SEPARATORS, COVERING ON EARTH CONDUCTORS AND SEMICONDUCTIVE ELASTO- MERIC SCREEN FOR CORE ASSEMBLY	16
7 MAXIMUM THICKNESS OF SEMICONDUCTIVE SCREEN FOR CORE ASSEMBLY	17
8 TESTS AND CRITERIA FOR SHEATHS	18
9 TESTS—CRITERIA, CATEGORY AND REFERENCE	19
10 PARTIAL DISCHARGE VOLTAGE LEVELS MEASURED ON FALLING VOLTAGE	24
11 HIGH VOLTAGE a.c. TEST VOLTAGES	24
12 IMPULSE WITHSTAND VOLTAGES (Class 1 cables rated 11/11 kV and above) . . .	25
13 HIGH VOLTAGE a.c. TEST VOLTAGES (4 h test)	26

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](#)
-