AS/NZS 1125:2001
(Incorporating Amendment No. 1)
Reconfirmed 2017

Australian/New Zealand Standard™

Conductors in insulated electric cables and flexible cords

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-003, Electric Wires and Cables. It was approved on behalf of the Council of Standards Australia on 21 May 2001 and on behalf of the Council of Standards New Zealand on 8 May 2001.
This Standard was published on 29 June 2001.

The following are represented on Committee EL-003:

Australasian Railway Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Department of Defence, Australia
Department of Mineral Resources, N.S.W.
Electrical Contractors Association of New Zealand
Electricity Supply Association of Australia
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This Standard was issued in draft form for comment as DR 00094.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION
OF
AS/NZS 1125:2001
Conductors in insulated electric cables and flexible cords

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Technical Committee EL-003 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 10 October 2016.

Approved for reconfirmation in New Zealand on behalf of the Standards Council of New Zealand on 13 December 2016.

The following are represented on Technical Committee EL-003:

Australian Cable Makers' Association
Australian Industry Group
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
National Electrical and Communications Association
Queensland University of Technology

NOTES

AS/NZS 1125:2001
(Incorporating Amendment No. 1)

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Conductors in insulated electric cables and flexible cords

Originated as part of AS C324—1960 and AS C407—1969.
Previous edition AS 1125—1993.
Jointly revised and designated AS/NZS 1125:2001.
Reissued incorporating Amendment No. 1 (August 2004).

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 3957 1

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables, to supersede AS 1125—1993 and NZS/AS 1125—1993, *Conductors in insulated electric cables and flexible cords*.

This Standard incorporates Amendment No. 1 (August 2004). 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.

The conductors specified herein have nominal cross-sectional areas identical with those of corresponding conductors specified in IEC 60228 (see below). This Standard includes conductors for which IEC makes no provision, namely Milliken conductors and solid sectoral circular conductors.

This Standard differs from the previous edition in the following ways:

(a) It is published as a Joint Australian/New Zealand Standard.

(b) There has been considerable reformatting including the consolidation of a number of tables of conductors.

(c) Conductor classes 1, 2, 5 and 6 from IEC 60228 have been introduced.

(d) A definition of ‘metal-coated copper conductor’ has been included.

(e) The specification for tin coatings has been deleted.

(f) The section on silver-plated and nickel-coated annealed copper conductors has been consolidated into a general section on copper conductors.

(g) The constructional specification for multiple-stranded circular annealed copper conductors (rope lay) has been deleted.

Attention is drawn to the fact that the conductors specified represent (with the exception of conductors for special purposes) the overall range in the types of metals currently specified. It does not necessarily follow that each of the types and sizes of conductor is to be used for a particular cable. The individual Standard for such cable will specify the size and type of conductors that are applicable, from the range given in this Standard.

In the preparation of this Standard, consideration was given to the following Standards:

IEC

60228 Conductors of insulated cables

BS

3988 Specification for wrought aluminium for electrical purposes. Solid conductors for insulated cables

Acknowledgment is made of the assistance received from these documents.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for conductors in insulated electric cables and flexible cords used for general wiring cables for land installations and, in the case of copper conductors only, for ships' wiring.

This Standard applies particularly to conductors for those types of cable and flexible cord to which the relevant Australian or Australian/New Zealand Standard makes cross-reference. This Standard is not necessarily limited to conductors of such cables and cords and should be applied, wherever practicable, to cables designed for general and special purposes.

The conductors specified here do not apply to the following:

(a) Magnet winding wire including litz wire (see AS/NZS 1194.1).

(b) Mineral-insulated metal-sheathed (MIMS) cables (see AS/NZS 3187).

(c) Cables intended for use at audio or higher frequencies, e.g. telecommunication cables.

(d) Welding cables (see AS/NZS 1995).

NOTE: The method of calculation used to establish the conductor maximum d.c. resistance values is given in Appendix A.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
2848 Aluminium and aluminium alloys—Compositions and designations
2848.1 Part 1: Wrought products

AS/NZS
1194 Winding wires
1194.1 Part 1: Enamelled round copper winding wires

1574 Copper and copper alloys—Wire for electrical purposes

1660 Test methods for electrical cables, cords and conductors

1995 Welding cables

3000 Electrical installations (known as the Australian/New Zealand Wiring Rules)

3187 Approval and test specification—Mineral-insulated metal-sheathed cables

BS
3988 Specification for wrought aluminium for electrical purposes. Solid conductors for insulated cables