

Australian/New Zealand Standard™

Electric cables—Polymeric insulated

**Part 2: For working voltages up to and
including 450/750 V**



AS/NZS 5000.2:2006

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 30 June 2006 and on behalf of the Council of Standards New Zealand on 23 June 2006.

This Standard was published on 19 July 2006.

The following are represented on Committee EL-003:

Australasian Railway Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Canterbury Manufacturers Association New Zealand
Department of Primary Industries, Mine Safety (NSW)
Electrical Contractors Association of New Zealand
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This Standard was issued in draft form for comment as DR 05495.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

AS/NZS 5000.2:2006

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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.

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NOTES

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Originally as AS/NZS 5000.2:1999.
Second edition 2006.

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Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 7622 1

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables, to supersede AS/NZS 5000.2: 1999.

The objective of this Standard is to provide construction, dimensions and tests for single-core and multicore polymeric insulated and oversheathed cables up to and including 16 mm² conductor size intended for use in power and lighting circuits in installations at working voltages up to and including 450/750 V.

In preparation of this Standard consideration was given to IEC 60227-4, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V, Part 4: Sheathed cable for fixed wiring* and acknowledgment is made of the assistance received from that source.

The nominal cross-sectional areas of the conductors specified in this Standard are based on the values recommended in IEC 60228, *Conductors of insulated cables*.

This Standard differs from the 1999 edition in the following significant ways:

- (a) Class 1 conductors are not permitted for 1.5 mm² sizes and above.
- (b) The calculated value of the oversheath thickness for circular multicore cables has been subjected to a minimum value of 1.2 mm.
- (c) The option of armoured cables has been deleted.
- (d) The 25 mm² conductor size in Tables 1 and 2 has been deleted.
- (e) A requirement has been included for legibility of the cable marking.
- (f) Requirements for qualification testing have been included.

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.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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1 SCOPE

This Standard specifies construction, dimensions and tests for single-core and up to 4-core and earth multicore polymeric insulated and oversheathed cables up to and including 16 mm² conductor size intended for fixed applications in power and lighting circuits in installations at working voltages up to and including 450/750 V.

Insulated unsheathed cables are not included in this Standard (refer to AS/NZS 5000.1).

This Standard does not apply to specialized polymeric insulated cables for which there are separate Australian/New Zealand Standards, e.g. flexible cords.

NOTE: Purchasing guidelines are contained in Appendix A.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

1125	Conductors in insulated electric cable and flexible cords
1660	Test methods for electric cables, cords and conductors
1660.1	Method 1: Conductors and metallic components
1660.2.1	Method 2.1: Insulation, extruded semi-conductive screens and non-metallic sheaths—Methods for general application
1660.2.2	Method 2.2: Insulation, extruded semi-conductive screens and non-metallic sheaths—Methods specific to elastomeric, XLPE and XLPVC materials
1660.2.3	Method 2.3: Insulation, extruded semi-conductive screens and non-metallic sheaths—Methods specific to PVC and halogen free thermoplastic materials
1660.3	Method 3: Electrical tests
1660.5.6	Method 5.6: Fire tests—Test for vertical flame propagation for a single insulated wire or cable
3000	Electrical installations
3808	Insulating and sheathing materials for electric cables
5000	Electric cables—Polymeric insulated
5000.1	Part 1: For working voltages up to and including 0.6/1 (1.2) kV

3 DEFINITIONS

For the purposes of this Standard, definitions given in the referenced Standards and those below apply.

3.1 Core (of a cable)

The conductor with its insulation but not including any protective covering.