AS/NZS 5000.2:2006
Reconfirmed 2017

Australian/New Zealand Standard™

Electric cables—Polymeric insulated

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

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.
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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
Electrical Regulatory Authorities Council
Energy Networks Association
Engineers Australia
Ministry of Economic Development (New Zealand)

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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 or Standards New Zealand at the address shown on the back cover.

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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RECONFIRMATION NOTICE

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.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

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

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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

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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 mm^2 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 cables 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 mm^2 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 mm^2 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 mm^2 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 cables 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.