Australian/New Zealand Standard™

Electric 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 4 September 2003 and on behalf of the Council of Standards New Zealand on 30 September 2003. It was published on 30 October 2003.

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This Standard was issued in draft form for comment as DR 02436.

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Electric flexible cords

Originated as part of AS C50—1928, AS C116—1941, AS C130—1941 and AS (E) C502—1943.
Previous edition AS/NZS 3191:1996.
Sixth edition 2003.

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 5513 5

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables to supersede AS/NZS 3191:1996*, Approval and test specification—Electric flexible cords*.

The objective of the Standard is to specify construction, dimensions and tests for flexible cords insulated with thermoplastic or crosslinked PVC, thermoplastic or crosslinked elastomers or glass fibre which, dependent on cord type, are designed for working voltages up to and including 250/250 V, 250/440 V or 0.6/1 kV.

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

Where the equivalent cords exist in IEC Standards, the dimensions for insulation and sheath thicknesses have been adopted in this Standard. This is the case for thermoplastic PVC and crosslinked elastomer insulated flexible cords, where these dimensions are identical with the values for the corresponding cords in IEC 60227, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V* and IEC 60245*, Rubber insulated cables—Rated voltages up to and including 450/750 V* respectively. The temperature ratings and hence properties of insulation and sheath materials for these dimensionally equivalent cords, however, are quite different.

There are no current equivalent IEC Standards for flexible cords insulated with crosslinked PVC, thermoplastic elastomer or glass fibre.

This Standard differs from the 1996 edition as follows:

(a) References to the maximum continuous conductor temperature of flexible cords have been deleted.

(b) Insulation and sheathing materials have been referenced to AS/NZS 3808.

(c) The approximate overall diameters provided in the tables of dimensions have been deleted.

(d) The clauses of construction have been rearranged into a more logical sequence.

(e) Composite screen constructions have been deleted.

(f) Textile braided thermoplastic elastomer insulated and thermoplastic PVC insulated flexible cords have been deleted.

(g) Thermoplastic fluoropolymer insulated flexible cords have been deleted.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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SECTION 1 SCOPE AND APPLICATION

1.1 SCOPE

This Standard specifies construction, dimensions and tests for flexible cords insulated with thermoplastic or crosslinked PVC, thermoplastic or crosslinked elastomers, or glass fibre which, dependent on cord type, are designed for working voltages up to and including 250/250 V, 250/440 V or 0.6/1 kV. Compliance with this Standard does not necessarily imply suitability for end use. End applications shall be considered to ensure appropriate cord selection.

NOTES:

1 This Standard is intended to apply only to flexible cords of the types and sizes which are included. It is not intended, however, that other types or sizes of flexible cord should be precluded from use, and regulatory authorities will consider the issue of a Certificate of Suitability for connection to the supply mains under the non-declared scheme for other types and sizes as they are developed. Any application for such certification should be accompanied by a description of the flexible cord.

2 Purchasing guidelines are contained in Appendix A.

3 The AS/NZS 3350 series of appliance Standards, nominates flexible cords to IEC 60227 and IEC 60245. Appendix B will facilitate the selection of cords to AS/NZS 3191, which should replace the designated IEC cords.

4 AS/NZS 3008.1 should be referenced to ensure correct flexible cord selection for the intended application.

1.2 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
1660.3	Method 3: Electrical tests
1660.4	Method 4: Complete cable and flexible cord
1660.5.6	Method 5.6: Fire tests—Test for combustion propagation
3008	Electrical installations—Selection of cables
3008.1	Cables for alternating voltages up to and including 0.6/1kV (all Parts)
3109	Approval and test specification—Appliance couplers for household and similar general purposes
3109.1	Part 1: General requirements
3350	Safety of household and similar electrical appliances (all Parts)
3808	Insulating and sheathing materials for electric cables