AS/NZS 3191:2008

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 11 January 2008 and on behalf of the Council of Standards New Zealand on 21 December 2007.
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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
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This Standard was issued in draft form for comment as DR 06445.

Australian/New Zealand Standard™

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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 3191:2003.

The objective of the Standard is to specify construction, dimensions and tests for flexible cords insulated with thermoplastic or cross-linked PVC, cross-linked elastomers or cross-linked polyolefin 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 cross-linked 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 cross-linked PVC or cross-linked polyolefin.

This Standard differs from the 2003 edition as follows:

(a) Glass fibre insulated flexible cords have been deleted as they are now included in AS/NZS 3158.

(b) Thermoplastic elastomer insulated flexible cords have been deleted.

(c) Both duty rating and voltage designation have been provided for all constructions.

(d) The Tables of insulation and sheathing thicknesses for the various flexible cord types have been removed from the construction Clauses and consolidated into four Tables.

(e) The recommended neutral core colour has been changed from ‘blue’ to ‘light blue’ to align with IEC Standards.

(f) Superfluous wording has been deleted from the Clauses covering construction requirements.

(g) The Clauses on marking have been revised.

(h) Cross-linked polyolefin insulation materials have been added.

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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1.1 SCOPE

This Standard specifies construction, dimensions and tests for flexible cords insulated with thermoplastic or cross-linked PVC, cross-linked elastomers, or cross-linked polyolefin 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 need to 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 and AS/NZS 60335 series of appliance Standards, nominate flexible cords to IEC 60227 and IEC 60245. Appendix B will facilitate the selection of cords to this Standard, 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 in respect of current ratings.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS ISO
1302 Geometrical product specifications (GPS)—Indication of surface texture in technical product documentation

AS/NZS
1125 Conductors in insulated electric cables and flexible cords

1660 Test methods for electric cables, cords and conductors
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