AS/NZS 3808:2000
(Incorporating Amendment Nos 1 and 2)
Reconfirmed 2017



Australian/New Zealand Standard™

# Insulating and sheathing materials for electric cables

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 28 March 2000 and on behalf of the Council of Standards New Zealand on 11 April 2000.
This Standard was published on 12 May 2000.

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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
Institution of Engineers, Australia
Ministry of Commerce, New Zealand
National Electrical & Communications Association, Australia
New Zealand Manufacturers Federation
Regulatory Authorities (Electrical)
Testing interests (Australia)

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

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*This Standard was issued in draft form for comment as DR 99116.*

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

# RECONFIRMATION
# OF
# AS/NZS 3808:2000
# Insulating and sheathing materials for electric cables

## 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.

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 3808:2000
(Incorporating Amendment Nos 1 and 2)

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# Insulating and sheathing materials for electric cables

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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 3808:1998, Insulating and sheathing materials for electric cables.

*This Standard incorporates Amendment No. 1 (July 2002) and Amendment No. 2 (August 2004). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

The objective of the Standard is to provide manufacturers and suppliers with specifications for compounds and tests, referenced in particular Standards, for insulating and sheathing materials used in the construction of electric cables and flexible cords.

This Standard does not supersede insulating and sheathing material requirements in existing cable Standards but will apply when referenced in future editions of cable Standards.

This Standard differs from the superseded Standard as follows:

(a) The definition of materials used in reduced fire hazard cables has been modified.

(b) X-FP-90 insulation has been deleted.

(c) The median loss of mass criteria for PVC materials after ageing in an air oven has been increased.

(d) The minimum oxygen concentration test for insulation materials used in reduced fire hazard cables has been deleted.

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

# Australian/New Zealand Standard
# Insulating and sheathing materials for electric cables

## 1 SCOPE

This Standard specifies the tests and criteria for elastomeric, PVC, reduced fire hazard and polyolefin insulating and sheathing materials used in the construction of electric cables and flexible cords and referenced in Australian and Australian/New Zealand Standards. It applies to electric cables and cords designed for working voltages up to and including 76/132(145) kV. This Standard does not cover tests that can only be conducted on completed cables, e.g. partial discharge, tan δ, impulse, high voltage, shrinkage and adhesion tests.

The requirements of this Standard only apply when referenced in other relevant Standards. This Standard does not supersede requirements in existing Standards.

NOTE: Insulating and sheathing materials in other relevant Standards are listed in Table A1 of Appendix A.

## 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1026 Electric cables—Impregnated paper insulated—Working voltages up to and including 33 kV

1049 Telecommunication cables—Insulation, sheath and jacket

1178 Concentric wire neutral cables—XLPE insulated—For electricity supply at working voltages of 0.6/1 kV

1429 Electric cables—Polymeric insulated

1429.1 Part 1: For working voltages 1.9/3.3(3.6) kV up to and including 19/33(36) kV

1747 Reeling, trailing and feeder cables used for mining—Repair and testing

1979 Electric cables—Lifts—Flexible travelling

2276 Cables for traffic signal installations

2276.1 Part 1: Multicore power cables

2276.3 Part 3: Loop cable for vehicle detectors

2802 Electric cables—Reeling and trailing—For mining and general use (other than underground coal mining)

3158 Approval and test specification—Electric cables—Glass fibre insulated for working voltages up to and including 0.6/1 kV

3178 Approval and test specification—Electric cables—Silicone rubber insulated—For working voltages up to and including 0.6/1 kV