

Australian/New Zealand Standard™

**Polyvinyl chloride insulated cables of  
rated voltages up to and including  
450/750 V**

**Part 5: Flexible cables (cords)**

### **AS/NZS 60227.5:2003**

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 8 May 2003 and on behalf of the Council of Standards New Zealand on 22 May 2003. It was published on 16 June 2003.

---

The following are represented on Committee EL-003:

Australian Electrical and Electronic Manufacturers Association  
Australian Industry Group  
Canterbury Manufacturers Association New Zealand  
Department of Defence (Australia)  
Department of Natural Resources NSW  
Electrical Contractors Association of New Zealand  
Electrical Regulatory Authorities Council  
Electricity Supply Association of Australia  
Institution of Engineers  
Ministry of Economic Development (New Zealand)  
National Electrical and Communications Association

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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.

---

*This Standard was issued in draft form for comment as DR 03050.*

---

## Australian/New Zealand Standard™

# Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V

## Part 5: Flexible cables (cords)

First published as AS/NZS 60227.5:2003  
Reissued incorporating Amendment No. 1 (August 2004)

### **COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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 5317 5

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, EL-003 Electric Wires and Cables.

*This Standard incorporates Amendment No. 1 (August 2004). The changes required by the Amendment 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 this Standard is to provide international construction and test requirements for polyvinyl chloride insulated flexible cords as an alternative to those provided in the current Australian/New Zealand Standard, AS/NZS 3191.

This Standard is identical with, and has been reproduced from, IEC 60227-5, Edition 2.1:1998, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V, Part 5: Flexible cables (cords)*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'this international standard' should read 'this Joint Standard'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

## CONTENTS

	<i>Page</i>
1 General.....	1
2 Flat tinsel cord .....	2
A1   3 Not used .....	4
4 Cord for indoor decorative lighting chains .....	4
5 Light polyvinyl chloride sheathed cord.....	6
6 Ordinary polyvinyl chloride sheathed cord.....	9
7 Heat-resistant light PVC-sheathed cord for a maximum conductor temperature of 90 °C .....	12
8 Heat-resistant ordinary PVC-sheathed cord for a maximum conductor temperature of 90 °C .....	15
A1   Bibliography .....	18
Table 1 – General data for type 60227 IEC 41.....	3
Table 2 – Tests for type 60227 IEC 41 .....	3
A1   Table 5 – General data for type 60227 IEC 43.....	5
Table 6 – Tests for type 60227 IEC 43 .....	5
Table 7 – General data for type 60227 IEC 52.....	7
Table 8 – Tests for type 60227 IEC 52 .....	8
Table 9 – General data for type 60227 IEC 53.....	10
Table 10 – Tests for type 60227 IEC 53.....	11
Table 11 – General data for type 60227 IEC 56.....	13
Table 12 – Tests for type 60227 IEC 56.....	14
Table 13 – General data for type 60227 IEC 57.....	16
Table 14 – Tests for type 60227 IEC 57.....	17

NOTES

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

---

**Australian/New Zealand Standard****Polyvinyl chloride insulated cables of rated voltages up to and including  
450/750 V  
Part 5: Flexible cables (cords)**

---

**1 General****1.1 Scope**

This part of AS/NZS 60227 details the particular specifications for polyvinyl chloride insulated flexible cables (cords), of rated voltages up to and including 300/500 V.

All cables comply with the appropriate requirements given in IEC 60227-1 and each individual type of cable complies with the particular requirements of this part.

**1.2 Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of AS/NZS 60227. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of AS/NZS 60227 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60227-1:1993, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements*

IEC 60227-2:1979, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 2: Test methods*

IEC 60228:1978, *Conductors of insulated cables. Guide to the dimensional limits of circular conductors*

IEC 60332-1:1993 *Tests on electric cables under fire conditions – Part 1: Test on a single vertical insulated wire or cable*

IEC 60811-1-1:1993, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general applications – Section 1: Measurement of thickness and overall dimensions – Tests for determining the mechanical properties*

IEC 60811-1-2:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general applications – Section 2: Thermal ageing methods*

IEC 60811-1-4:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 1: Methods for general applications – Section 4: Tests at low temperature*

IEC 60811-3-1:1985, *Common test methods for insulating and sheathing materials of electric cables – Part 3: Methods specific to PVC compounds – Section 1: Pressure test at high temperature – Tests for resistance to cracking*