



# **Telecommunication cables—Insulation, sheath and jacket**

## **Part 1: Materials**



This Australian Standard® was prepared by Committee CT-001, Communications Cabling. It was approved on behalf of the Council of Standards Australia on 6 February 2014. This Standard was published on 28 February 2014.

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- Australian Information Industry Association
- BICSI Australia
- BICSI New Zealand
- Electrical Trades Union
- Energy Networks Association
- Engineers Australia
- National Electrical and Communications Association
- Telecommunications Users Association of New Zealand
- Telstra Corporation

Additional Interests:

- Australian Communications and Media Authority
  - Communications Alliance
- 

This Standard was issued in draft form for comment as DR AS 1049.1.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard<sup>®</sup>

## Telecommunication cables—Insulation, sheath and jacket

### Part 1: Materials

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## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling, to supersede, AS 1049.1—2008, *Telecommunication cables—Insulation, sheath and jacket, Part 1: Materials*.

*This Standard incorporates Amendment No. 1 (February 2019). 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.*

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

AS 1049.1 (this Standard) has been updated to incorporate a new grade of polyamide compound available to the market. AS 1049.2—2008, *Test methods* [including AS 1049.2—2008/Amdt 1(2010)] remains unchanged.

The objective of this Standard is to specify the material requirements of the finished products and some of the compounds used to manufacture telecommunication cables. Test methods to evaluate the properties are specified in Part 2. This Standard is intended for use by polymer manufacturers, communication cable manufacturers and end-users.

Statements expressed in mandatory terms in footnotes to tables are deemed to be requirements of this Standard.

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. Informative sections are included also in the main body of this Standard.

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 APPLICATION .....	4
1.3 REFERENCED DOCUMENTS.....	4
1.4 DEFINITIONS.....	6
1.5 ABBREVIATIONS .....	9
SECTION 2 MATERIAL SELECTION	
2.1 GENERAL.....	11
2.2 TEMPERATURE RATINGS.....	11
2.3 FIRE AND FLAME TESTS .....	11
2.4 MULTIPLE LAYER INSULATION .....	11
SECTION 3 POLYOLEFINS	
3.1 GENERAL.....	13
3.2 COMPOUND.....	13
3.3 INSULATION .....	14
3.4 PP SOLID INSULATION .....	19
3.5 PE SHEATH OR PE JACKET.....	19
SECTION 4 POLYVINYL CHLORIDE	
4.1 SCOPE OF SECTION .....	25
4.2 INSULATION TESTS.....	25
4.3 SHEATH OR JACKET TESTS .....	25
SECTION 5 POLYAMIDES	
5.1 SCOPE OF SECTION .....	28
5.2 INSULATION TESTS.....	28
5.3 POLYAMIDE JACKET .....	28
5.4 INTEGRALLY BONDED PE SHEATH AND POLYAMIDE JACKET.....	31
5.5 INTEGRALLY BONDED SHEATH AND JACKET.....	31
SECTION 6 OTHERS	
6.1 SCOPE OF SECTION .....	33
6.2 NON-HALOGENATED FIRE-RETARDANT PPO-BASED MATERIAL FOR SOLID INSULATION.....	33
6.3 HFFR INSULATION.....	34
6.4 HFFR SHEATH OR JACKET.....	34
6.5 FLUOROPOLYMER INSULATION, SHEATH OR JACKET .....	35
6.6 CROSSLINKED POLYMER INSULATION, SHEATH OR JACKET .....	37
APPENDICES	
A SUMMARY OF MATERIAL TESTS .....	39
B PURCHASING GUIDELINES.....	42

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**Australian Standard**

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Part 1: Materials

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SECTION 1 SCOPE AND GENERAL

### 1.1 SCOPE

This Standard specifies the material requirements of the finished products and some of the compounds used to manufacture telecommunication cables. AS 1049.2 provides test methods to evaluate the properties specified.

This Standard specifies the requirements for the composition of various materials for insulation, sheath and jacket.

Section 2 discusses the selection of materials. Sections 3 to 6 specify the requirements of the compounds and finished products for polyolefins, polyvinyl chloride (PVC), polyamides and others.

NOTE: Appendix A sets out a summary of the material test methods that are included in AS 1049.2, which provides a set of reference test methods for determination of compliance with the requirements of this Standard.

The scope of this Standard does not include the following:

- (a) Cables using materials that are semi-conductive.
- (b) Aspects of telecommunication cables such as spacers or cores in coaxial cables.
- (c) Dimensions or electrical requirements of completed cables.
- (d) Cables used to conduct electrical power.

### 1.2 APPLICATION

This Standard is intended for use by the following:

- (a) Polymer manufacturers, to form the basis of the raw material quality control procedures for the manufacture of PE and PA compounds.
- (b) Cable manufacturers, to form the basis of the cable material quality control procedures for the manufacture of a range of insulation, sheath and jackets of different materials.
- (c) Cable end users, to form the basis of the cable acceptance procedures for the completed cable.

### 1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1049	Telecommunication cables—Insulation, sheath and jacket
1049.2	Part 2: Test methods