AS 1049.1—2008

Australian Standard®

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 14 August 2008.
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- Australian Chamber of Commerce and Industry
- Australian Communications and Media Authority
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- ACE Technical Consulting
- Australian Vinyls
- General Cable Australia
- General Cable New Zealand
- International Testing and Certification Services
- Panduit (Australia)
- Ponga Donga
- Prysmian Power Cables & Systems Australia

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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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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, in part, AS 1049—2003, *Telecommunication cables—Insulation, sheath and jacket*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian rather than an Australian/New Zealand Standard.

In the revision of AS 1049—2003, the Committee decided to issue the new edition in two parts, as follows:

AS	
1049	Telecommunication cables—Insulation, sheath and jacket
1049.1	Part 1: Materials (this Standard)
1049.2	Part 2: Test methods

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.

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.

The meanings of terms used in this Standard are as follows:

Shall—indicates that a statement is mandatory.

Should—indicates a recommendation.

May—indicates the existence of an option.

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

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the material requirements of the finished products and forms 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
1886	Glossary of terms relating to plastics
2700	Colour Standards for general purposes