Australian Standard™

Telecommunications cables—Insulation, sheath and jacket

Standards Australia

This Australian Standard was prepared by Committee TE/9, Materials for Telecommunication Cable. It was approved on behalf of the Council of Standards Australia on 3 December 1999 and published on 11 May 2000.

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Australian Electrical and Electronic Manufacturers Association

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PREFACE

This Standard was prepared by the Standards Australia Committee TE/9, Materials for Telecommunication Cable, to supersede AS 1049—1996. In the course of preparation, this Standard has incorporated relevant material from UL 444, *Communications cables*.

The objective of this Standard is to provide polymer manufacturers, telecommunications cable manufacturers and end users with requirements and test methods for plastics used in telecommunications cables insulation, sheathing and jackets in order to maintain quality control and acceptance levels at the various stages of manufacture.

The objective of this revision is to incorporate requirements for additional materials used for insulation, sheaths and jackets.

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.

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

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S E C T I O N 1 S C O P E A N D G E N E R A L

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

The Standard specifies the composition, physical, electrical requirements and test methods of various materials, insulation, sheath and jacket as follows:

(a) *Sections 2 to 15* Sections 2 to 15 specify the requirements of the compounds and finished products.

(b) *Appendices A to AI* Appendices A to AI provide a set of reference test methods for determination of compliance with the requirements of this Standard.

NOTE: Appendix AJ provides recommendations for purchasing guidelines to be supplied at the time of enquiry or order of the cable.

This Standard does not cover cables using materials that are semi-conductive.

This Standard does not include such aspects of telecommunication cables as spacers or cores in co-axial cables.

This Standard does not include dimensions or electrical requirements of completed cables.

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 12 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.

For different cable materials, tests are performed on—

(i) compounds;

(ii) insulation, sheath and jacket materials taken during manufacture; and

(iii) insulation, sheath and jacket materials taken from completed cable.

These requirements are summarized in Table 1.1.

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