

Australian Standard[®]

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

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The following interests are represented on Committee TE/9:

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PREFACE

This Standard was prepared by the Standards Australia Committee TE/9 on Materials for Telecommunication Cable to supersede AS 1049 — 1986, *Telecommunication cables—Insulation and sheath—Polyethylene*.

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

This Standard has been revised with the objective of incorporating requirements for additional materials used for insulation, sheaths and jackets in telecommunication cable.

Materials used in outdoor telecommunication cables are addressed by this Standard. Additional materials for use in telecommunication cables are to be the subject of the next revision of this Standard.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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STANDARDS AUSTRALIA

Australian Standard

Telecommunication cables—Insulation, sheath and jacket

SECTION 1 SCOPE AND GENERAL

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

The finished products in this Standard include polyethylene insulation, polyethylene sheath and jacket, polyamide 12 insect-resistant jacket and integrally bonded polyethylene sheath/polyamide 12 jacket.

The requirements and tests apply to both solid and cellular polyethylene insulation on metallic conductors of both filled and air-cored cables, to solid polyethylene jacket over a lead sheath, to solid polyethylene sheath with or without a metallic screen, moisture barrier or insect resistant jacket, and to solid polyamide 12 insect-resistant jacket either unbonded or bonded to the underlying polyethylene sheath.

The Standard specifies the composition, physical and electrical requirements of various materials, insulation, sheath, jacket and cable in five main sections as follows:

- (a) *Sections 2 to 5* Specify the requirements of the compounds and finished products which form the basis of the raw material quality control procedures for the polymer manufacturer and cable manufacturer and provide the basis of the cable manufacturer's quality control and end-user acceptance procedures of the completed cable.
- (b) *Appendices A to R* Provide a set of reference test methods for determination of compliance with the requirements of this Standard.

1.2 APPLICATION This Standard applies to the testing of polyethylene materials for insulation, sheath and jacket and to polyamide 12 materials for jacket prior to, during and following manufacture of telecommunication cables.

This Standard does not cover cables using materials that are semi-conductive, formulated for cross-linking or to be fire retardant.

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

This Standard does not include dimensions of completed cables.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
1152	Specification for test sieves
1193	Plastics—Methods for determining the density and relative density of non-cellular plastics
1886	Glossary of terms relating to plastics
2001	Methods of test for textiles
2001.4	Colourfastness tests