

Australian/New Zealand Standard™

**Polyethylene (PE) compounds for
pressure pipes and fittings**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PL-006, Polyolefin Pipe Systems. It was approved on behalf of the Council of Standards Australia on 28 February 2003 and on behalf of the Council of Standards New Zealand on 20 February 2003.
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The following are represented on Committee PL-006:

Australian Gas Association
CSIRO Manufacturing and Infrastructure Technology
Certification Bodies (Australia)
Institution of Engineers
Master Plumbers, Gasfitters and Drainlayers New Zealand
New Zealand Water and Waste Association
Plastics Industry Pipe Association of Australia
Plastics New Zealand
Water Services Association of Australia

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Polyethylene (PE) compounds for pressure pipes and fittings

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committees PL-006, *Polyolefin Pipe Systems*, to supersede AS/NZS 4131—2001, Polyethylene (PE) compounds for pressure pipes and fittings.

This Standard incorporates Amendment No. 1 (May 2005). 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 a standard specification for manufacturers and purchasers of these products.

This document is based largely on the latest ISO and CEN documents and consequently provides for compatibility of compounds of different origin.

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.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard. Other notes are for information only.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Polyethylene (PE) compounds for pressure pipes and fittings****1 SCOPE AND APPLICATION****1.1 Scope**

This Standard specifies requirements for polyethylene compounds (PE 80 and PE 100) suitable for manufacturing polyethylene pipes and fittings for pressure applications. Minimum requirements are given for materials, additives and long-term pressure performance.

Methods of demonstrating compliance with this Standard are given in Appendix A.

NOTE: Compounds complying with this Standard are not intended for use with gas containing more than 1% aromatics by volume. Where aromatic content is greater than this, testing for resistance to gas constituents should be carried out in accordance with ISO 4437.

1.2 Application

The test requirements specified in this Standard may be achieved by alternative test methods if such methods can be shown to provide equal or greater accuracy than those specified herein. In all cases of dispute, the methods specified in this Standard shall be considered the reference test methods.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1049 Telecommunication cables—Insulation, sheath and jacket
- 1199 Sampling procedures and tables for inspection by attributes
- 1145 Determination of tensile properties of plastics materials
- 1145.2 Part 2: Test conditions for moulding and extrusion plastics
- 1745 Outdoor weathering of plastics in the Australian environment
- 1745.2 Part 2: Guide for design purposes
- 2193 Calibration and classification of force-measuring systems

AS/NZS

- 1462 Method of test for plastics pipes and fittings
- 1462.1 Part 1: Method for determining dimensions of pipes and fittings
- 1462.27 Part 27: Toluene extract of carbon black
- 1462.28 Part 28 Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds
- 3500 National Plumbing and Drainage Code
- 3500.0 Part 0: Glossary of terms
- 4020 Testing of products for use in contact with drinking water
- 4130 Polyethylene (PE) pipes for pressure applications