AS/NZS 1518:2002
(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

External extruded high-density polyethylene coating system for pipes

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-038, Petroleum pipelines. It was approved on behalf of the Council of Standards Australia on 27 July 2001 and on behalf of the Council of Standards New Zealand on 20 February 2002.
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The following are represented on Committee ME-038:

Australasian Corrosion Association
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Australian Pipeline Industry Association
Bureau of Steel Manufacturers
Co-operative Research Centre for Materials Welding and Joining
Department of Labour New Zealand
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Australian Gas Association
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Additional Interests:

Cathodic Protection Systems
Tyco Water Pipelines Research
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PREFACE

This Standard was prepared by Standards Australia/Standards New Zealand Committee, ME-038, Petroleum pipelines, to supersede AS 1518—1979, Extruded high-density polyethylene protective coating for pipes.

This objective of this Standard is to provide the manufacturers, suppliers, specifiers and users of oil and gas pipelines with a set of requirements for external protection against corrosion, using high-density polyethylene.

This Standard incorporates Amendment No. 1 (May 2006). 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 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 notes to figures and tables are deemed to be requirements of this Standard. All other notes are for information and guidance only.

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1 SCOPE

This Standard specifies requirements for external protection against corrosion of pipeline systems, whereby a sealant layer is interposed between the pipe and the extrudate of high-density polyethylene, applied using annular or lateral extrusion techniques, to comprise the external coating.

Materials complying with this Standard are intended for use where the pipe temperature during operation is in the range of –20°C to +55°C. Guidance is provided on selection and testing of the coating where elevated temperatures may be encountered during storage, stockpiling or construction. The performance of the coating at high and low temperatures may not be as reflected by tests carried out at ambient temperatures. For example, mastic creep and penetration, and coating system peel strength and cathodic disbanding resistance may not be as at ambient temperatures.

The coating is intended for use in applications where it is not subject to weather or ultra-violet light exposure. A safe period of 12 months of weather exposure after manufacture is allowed for completion of the installation of the pipeline system.

NOTES:

1 Guidelines for purchasers on information that should be supplied by the purchaser and those variables that should or may be agreed upon at the time of inquiry or order are given in Appendix A.

2 For submerged are welded pipe, additional consideration should be given to air entrapment along the length of the weld and localised stress on the polyethylene coating.

Methods for demonstrating compliance with this Standard are given in Appendix B.

Coatings applied over galvanized pipe shall comply with the requirements of Appendix C.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1145 Determination of tensile properties of plastics materials

A1 | 1145.3 Part 3: Determination of tensile properties of plastic materials—Test conditions for films and sheets

1199 Sampling procedures and tables for inspection by attributes

1399 Guide to AS 1199—Sampling procedures and tables for inspection by attributes

1627 Metal finishing—Preparation and pre-treatment of surfaces

1627.2 Part 2: Power tool cleaning

1627.4 Part 4: Abrasive blast cleaning

1627.9 Part 9: Pictorial surface preparation standards for painting steel surfaces

3894 Site testing of protective coatings

3894.1 Part 1: Non-conductive coatings—Continuity testing—High voltage ‘brush’ method

3894.4 Part 4: Determination of dry film thickness

3894.5 Part 5: Determination of surface profile