

Australian/New Zealand Standard™

**Bolted unrestrained mechanical  
couplings for waterworks purposes**



## **AS/NZS 4998:2009**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-016, Cast Iron Pressure Pipes and Fittings. It was approved on behalf of the Council of Standards Australia on 23 February 2009 and on behalf of the Council of Standards New Zealand on 9 March 2009.  
This Standard was published on 31 March 2009.

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The following are represented on Committee WS-016:

Australian Chamber of Commerce and Industry  
Australian Industry Group  
Certification Bodies, Australia  
Plastics Industry Pipe Association of Australia  
Plastics New Zealand  
Water Industry Operators Group of New Zealand  
Water Services Association of Australia

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First published as AS/NZS 4998:2009.

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Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 9061 5

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS-016, Cast Iron Pressure Pipes and Fittings.

The objective of this Standard is to provide performance requirements for manufacturers and purchasers of bolted unrestrained mechanical couplings.

This Standard is based on the water industry Standard WSA 105, which was published by the Water Services Association in July 2001.

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 of tables and figures are deemed to be requirements of this Standard. Other notes are for information and guidance only.

Australian Standards generally do not—

- (a) restate the duties of employers, employees, designers and installers;
- (b) determine the applicability of regulatory limitations; or
- (c) determine appropriate health and safety practices.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard****Bolted unrestrained mechanical couplings for waterworks purposes**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard specifies requirements for unrestrained mechanical couplings for joining above or below ground water mains and wastewater mains, other than polyethylene (PE) piping, with pressure classifications of PN 16 and PN 35 and nominal size DN 80 to DN 750 and for a maximum working temperature of 40°C.

Means for demonstrating compliance with this Standard are given in Appendix A.

## NOTES:

- 1 Requirements for couplings for use with polyethylene piping are specified in AS/NZS 4129.
- 2 Typical coupling arrangements are shown in Appendix B.

**1.2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

1110	ISO metric hexagon bolts and screws — Product grades A and B
1110.1	Part 1: Bolts
1111	ISO metric hexagon bolts and screws — Product grade C
1111.1	Part 1: Bolts
1112	ISO metric hexagon nuts
1112.1	Part 1: Style 1 — Product grades A and B
1112.3	Part 3: Product grade C
1199	Sampling procedures for inspection by attributes
1199.1	Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection
1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
1565	Copper and copper alloys—Ingots and castings
1646	Elastomeric seals for waterworks purposes
1671	Ductile cast iron
2074	Cast steels
2205	Methods of destructive testing of welds in metal
2205.10.1	Part 10.1: Corrosion test for welded austenitic stainless steel
2345	Dezincification resistance of copper alloys
3518	Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications
4041	Pressure piping