

Australian/New Zealand Standard™

Precast concrete pipes (pressure and non-pressure)



AS/NZS 4058:2007

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-006, Concrete Pipes. It was approved on behalf of the Council of Standards Australia on 22 January 2007 and on behalf of the Council of Standards New Zealand on 19 December 2006.

This Standard was published on 18 April 2007.

The following are represented on Committee WS-006:

Australasian Railway Association
Australian Chamber of Commerce and Industry
Brisbane City Council
Business New Zealand
Concrete Pipe Association of Australasia
Engineers Australia
Main Roads Department, QLD
Master Builders Australia
New Zealand Water and Waste Association
Precast New Zealand
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Originated, in part, as AS A35—1957 and AS A124—1962.
AS A35 revised and designated AS 1342—1973,
AS A124 revised and designated AS 1392—1974.
AS 1342—1973 and AS 1392—1974 revised and designated AS
4058—1992.
AS 4058—1992 and NZS 3107:1978 jointly revised and designated
AS/NZS 4058:2007.

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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 8161 6

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS—006, Concrete Pipes, to supersede AS 4058—1992, *Precast concrete pipes (pressure and non-pressure)* and NZS 3107:1978, *Specification for precast concrete drainage and pressure pipes*.

The objective of this revision is to update the Standard for publication as a joint Australian/New Zealand Standard.

Where a choice is given between an Australian Standard and a New Zealand Standard (for example, Testing) the Australian Standard will apply in Australia and the New Zealand Standard in New Zealand.

Users of the Standard are reminded that the means for determining whether a pipe, manufactured in accordance with this Standard, is suitable for a particular loading application, are contained in AS/NZS 3725, *Design for installation of buried concrete pipes*.

The in-service life of a pipeline installation is dependent on the pipe's manufacture, application and installation conditions. Based on past experience of concrete pipe installations, a service life of 100 years could be expected when pipes are manufactured in accordance with this Standard and installed in accordance with AS/NZS 3725 in a 'normal environment' and 'marine environment', as defined in this Standard. Pipes subject to 'other environments' (i.e. more aggressive) should be assessed for suitability using appropriate engineering judgement. See Appendix E of this Standard.

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

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard describes minimum requirements for materials and manufacture of controlled quality precast concrete pipes. It also describes minimum requirements for sampling, testing and classifying concrete pipes manufactured in accordance with this Standard.

This Standard applies to circular precast pipes manufactured from concrete, unreinforced or with circumferential steel reinforcement, that are intended for pressure or non-pressure water supply, drainage, sewerage or service duct applications.

This Standard does not apply to the following:

- (a) Cast in situ pipes, box culverts, or structural members covered by other Australian Standards.
- (b) Precast prestressed concrete pipe, embedded steel cylinder pipe, and fibre-reinforced concrete pipe or precast concrete cylindrical access chamber components, or pipes made of other materials.

Requirements for fittings fabricated from pipes complying with this Standard are not specified in this Standard.

Requirements for ordering and supplying concrete pipes are given in Section 6 (see Note 2).

NOTES:

- 1 This Standard does not cover the assessment of external service loads to which a pipe will be subjected in particular installation conditions. Therefore, purchasers should specify pipe design characteristics and routine testing requirements that are appropriate to the intended embedment and service conditions. Where a purchaser is not the concrete pipe asset owner, the purchaser should consult with the asset owner's designer or specifier to determine these requirements, prior to ordering.
- 2 AS/NZS 3725 should be referred to for the selection, design and specification of buried concrete pipe installations.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

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| 1379 | Specification and supply of concrete |
| 1478 | Chemical admixtures for concrete, mortar and grout |
| 1478.1 | Part 1: Admixture for concrete |
| 1646 | Elastomeric seals for waterworks purposes |
| 1646.1 | Part 1: General requirements |
| 1646.2 | Part 2: Material requirements for pipe joint seals used in water and wastewater applications—Specifies by prescription formulation |
| 1646.3 | Part 3: Material requirements for pipe joint seals used in water and wastewater applications with the exception of natural rubber and polyisoprene compounds |