

Australian/New Zealand Standard™

**On-site domestic wastewater treatment
units**

Part 1: Septic tanks

STANDARDS
Australia



STANDARDS
NEW ZEALAND
PAEREWA AOTEAROA



AS/NZS 1546.1:2008

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-013, On-site Domestic Wastewater Management. It was approved on behalf of the Council of Standards Australia on 16 May 2008 and on behalf of the Council of Standards New Zealand on 18 April 2008. This Standard was published on 25 May 2008.

The following are represented on Committee WS-013:

Association of Accredited Certification Bodies (Australia)
Association of Rotational Moulders (Australasia)
Auckland Regional Council
Australian and New Zealand Clinical Waste Management Industry Group
Australian Industry Group
Australian Water Association, National On-site Systems Special Interest Group
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This Standard was issued in draft form for comment as DR 06927.

Australian/New Zealand Standard™

On-site domestic wastewater treatment units

Part 1: Septic tanks

Originated in Australia as AS A178—1968.
Final Australian edition AS 1546—1990.
Originated in New Zealand as NZSS 758:1961.
Final New Zealand edition NZS 4610:1982.
AS 1546—1990 and NZS 4610:1982 jointly revised, amalgamated and redesignated AS/NZS 1546.1:1998.
Revised and reissued as AS/NZS 1546.1:2008.

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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 1 8697 5074 8

FOREWORD

This Standard is one of a series that has been revised by the Joint Standards Australia/Standards New Zealand Committee WS-013 on On-site Domestic Wastewater Management. It supersedes AS/NZS 1546.1:1998 On-site domestic wastewater treatment units Part 1: Septic tanks. The other Standards that have been revised by the committee are:

- AS/NZS 1547:2000 On-site domestic-wastewater management;
- AS/NZS 1546.2:2001 On-site domestic-wastewater treatment units Part 2: Waterless composting toilets; and
- AS/NZS 1546.3:2001 On-site domestic wastewater treatment units Part 3: Aerated wastewater treatment systems.

There is a twofold objective in this Standard. The first is to provide a set of performance statements which define the requirements of a septic tank against which any septic tank may be assessed. The second is to provide manufacturers of septic tanks and associated fittings with basic manufacturing and test specifications. These will enable certification bodies to check that a product conforms to the Standard.

In this revision some changes have been made for the testing of plastic tank materials. There are separate tests for injection moulded tanks and rotationally moulded tanks. These tests are a normative requirement. There has also been detail offered for the estimation of sidewall loading on tanks.

It is the intention of the committee that the next revision of the Standard will include performance criteria and test methods for control of total suspended solid (TSS) in the effluent from the septic tank. The committee recommends a total suspended solids discharge level of less than or equal to 100 g/m^3 be met.

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Published jointly by Standards Australia Ltd,
GPO Box 476, Sydney, NSW 2001, Australia, and
Standards New Zealand,
Private Bag 2439, Wellington 6140, New Zealand.

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**Australian/New Zealand Standard
On-site domestic wastewater management****Part 1: Septic tanks****1 GENERAL****1.1 Objective**

The objective of this Standard is to specify performance requirements and performance criteria for septic tanks, to specify technical means of compliance and to provide test specifications that will enable septic tanks to be manufactured to comply with the performance requirements and performance criteria.

1.2 Scope**1.2.1 General**

This Standard covers the manufacture of septic tanks and their associated fittings for the treatment of domestic wastewater only. This range of tanks typically is designed to cater for:

- (a) All-waste (Blackwater and Greywater);
- (b) Blackwater only;
- (c) Greywater (with or without kitchen waste included) only; and
- (d) Holding tanks (collection wells) and pump wells.

Septic tanks covered by this Standard are suitable for a flow of domestic wastewater of up to 14,000 litres per week.

C1.2.1

This flow limit represents a maximum daily flow of 2000 litres, being from up to 10 persons in a single residence, or an institutional or commercial facility which may have a varying 7-day or 5-day operation.

1.2.2 Structural design

This Standard provides guidance for consultants and designers of septic tank systems. Structural design provisions included in the document apply to conventional designs installed in standard situations. Specific structural design by a suitably qualified structural engineer, using appropriate design methodologies and relevant Standards, shall be carried out when any of the following conditions apply:

- (a) Capacity of the tank exceeds 6000 L;
- (b) Tank lid or wall is below ground level;
- (c) The internal diameter of the cylindrical tank and the internal width or internal height of a rectangular tank is greater than 1800 mm;
- (d) The internal length of a rectangular tank is greater than 2400 mm;
- (e) Tank lid plan area is greater than 4.5 m².