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# Australian Standard 1546—1983

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## SMALL SEPTIC TANKS



**STANDARDS ASSOCIATION OF AUSTRALIA**  
*Incorporated by Royal Charter*



This Australian standard was prepared by Committee WS/13, Septic Tanks. It was approved on behalf of the Council of the Standards Association of Australia on 11 January 1983 and published on 5 April 1983.

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The following interests are represented on Committee WS/13:

Confederation of Australian Industry  
Consulting engineers  
Department of Health, N.S.W.  
Department of Public Works, N.S.W.  
Fibreglass Reinforced Sheet Manufacturers Association  
Health Commission of Victoria  
Health Services Department, Tasmania  
Master Plumbers Association of South Australia  
Metropolitan Water Sewerage and Drainage Board  
Public Health Department, W.A.  
Queensland Water Resources Commission  
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**AUSTRALIAN STANDARD**

# **SMALL SEPTIC TANKS**

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## PREFACE

This edition of this standard was prepared by the Association's Committee on Septic Tanks to supersede AS 1546—1976.

The object of the standard is to establish requirements which make for simplicity, economy of design and satisfactory performance of septic tanks.

The main purpose of this edition is to introduce test requirements for concrete tanks for application of the AS Mark (see Clause 1.15). In addition appendices have been added to provide details of typical outlet fittings and of minimum septic tank capacities permitted by regulatory authorities.

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
**for**  
**SMALL SEPTIC TANKS**

## SECTION 1. SCOPE AND GENERAL PROVISIONS

**1.1 SCOPE.** This standard specifies requirements for septic tanks suitable for the reception of sewage and sullage from households not exceeding 10 persons.

**1.2 APPLICATION.** Septic tanks shall comply with the general requirements of Section 1 and with the specific requirements of the following Sections, as appropriate:

- Section 2—Cylindrical Precast Concrete Septic Tanks
- Section 3—Rectangular Cast-in-situ Concrete Septic Tanks
- Section 4—Rectangular Brick Septic Tanks
- Section 5—Rectangular Precast Concrete Septic Tanks
- Section 6—Glass Fibre Reinforced Plastics Septic Tanks

NOTE: Inclusion of further Sections for septic tanks approved by a Regulatory Authority will be considered on application to SAA.

**1.3 REFERENCED DOCUMENTS.** The following documents are referred to in this standard:

- AS 1012 Methods of Testing Concrete
  - Part 8—Method for making and curing concrete compression, indirect tensile and flexure test specimens in the laboratory or in the field
  - Part 9—Determination of compressive strength of concrete specimens
  - Part 14—Method for securing and testing cores from hardened concrete for compressive strength or indirect tensile strength
- AS 1260 Unplasticized PVC (UPVC) Pipes and Fittings for Sewerage Applications
- AS 1304 Hard-drawn Steel Wire Reinforcing Fabric for Concrete
- AS 1415 Unplasticized PVC (UPVC) Pipe and Fittings for Soil, Waste and Vent (SWV) Applications
- AS 1547 Code of Practice for Disposal of Effluent from Small Septic Tanks
- AS 1741 Vitrified Clay Pipes
- AS 2132 Methods for the Determination of the Flexural Properties of Plastics
- BS 2782 Methods of Testing Plastics
- BS 3396 Woven Glass Fibre Fabrics for Plastics Reinforcement
- BS 3496 E Glass Fibre Chopped Strand Mat for the Reinforcement of Polyester Resin Systems
- BS 3532 Unsaturated Polyester Resin Systems

for Low Pressure Fibre Reinforced Plastics

- BS 3691 Glass Fibre Rovings for Reinforcement of Polyester and of Epoxide Resin Systems
- BS 3749 Woven Roving Fabrics of E Glass Fibre for the Reinforcement of Polyester Resin
- BS 4408 Recommendations for Non-destructive Methods of Test for Concrete
  - Part 4—Surface Hardness Methods
- BS 4994 Vessels and Tanks in Reinforced Plastics
- PS 15:69 Custom Contact-moulded Reinforced-polyester Chemical Resistant Process Equipment (U.S. Department of Commerce).

**1.4 DEFINITIONS.** For the purpose of this standard, the following definitions apply:

**1.4.1 Septic tank**—a one-storey chamber, or chambers, through which sewage and/or sullage is allowed to flow slowly to permit settleable suspended matter to settle and be retained so that the organic matter in the sewage and/or sullage can be decomposed (digested) by anaerobic bacterial action into liquid, soluble, or gaseous substances.

**1.4.2 Sewage**—liquid wastes containing human faeces and urine.

**1.4.3 Scum**—a floating mass of sewage and/or sullage solids in a septic tank buoyed up by entrained gas, grease and/or other substances.

**1.4.4 Sludge**—semi-liquid solids settled from sewage and/or sullage in a septic tank.

**1.4.5 Sullage**—liquid wastes from bathrooms, laundries and kitchens, including floor wastes from these sources.

**1.5 NEW MATERIALS AND DESIGNS.** This standard shall not be interpreted to prevent the use of materials or designs for septic tanks not specifically referred to herein.

If it is desired to use materials or features of design not dealt with by this standard, details of such materials or designs shall be submitted to the appropriate Statutory Authority for approval.

**1.6 CAPACITY OF SEPTIC TANK.** The septic tank shall have a capacity measured below the invert of the outlet of the tank in accordance with the requirements of the appropriate Statutory Authority detailed in Appendix F.

**1.7 OPERATING DEPTH.** The depth of sewage and/or sullage in a septic tank, measured below the