

*Under Review see DR93283
Superseded by AS/NZS 1839:1994*

Australian Standard®

**Swimming pools—Premoulded
reinforced plastics—Installation**



STANDARDS AUSTRALIA 

This Australian Standard was prepared by Committee PL/41, Glass Reinforced Swimming Pools. It was approved on behalf of the Council of Standards Australia on 3 April 1989 and published on 13 October 1989.

The following interests are represented on Committee PL/41:

Acceptable Standards of Construction Committee, N.S.W.
Australian Confederation of Consumer Organizations
Australian Institute of Building Surveyors
Composites Institute of Australia
Construction and Housing Association of Australia
Department of Consumer Affairs, N.S.W.
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AS 1839—1989

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PREFACE

This Standard was prepared by the Standards Australia Committee on Glass Reinforced Swimming Pools, under the authority of the Plastics Standards Board to supersede AS 1839—1975, *Code of Practice for In-ground Installation of Premoulded Reinforced Plastics Swimming Pools*. This edition provides installation criteria for reinforced plastics swimming pools installed above the ground, in addition to installations in the ground.

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Australian Standard

Swimming pools—Premoulded reinforced plastics—Installation

1 SCOPE. This Standard sets out procedures for the installation of premoulded fibre reinforced plastics (FRP) swimming pools complying with the requirements of AS 1838.

2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS

1838 Swimming pools—Premoulded reinforced plastics—Design and fabrication
2818 Guide to swimming pool safety
3000 Electrical installations—Buildings, structures and premises

3 DEFINITIONS. For the purpose of this Standard the definition below applies.

3.1 Approved—approved by the appropriate statutory authorities.

4 STORAGE, HANDLING AND TRANSPORT OF POOLS. All pools shall be so designed as to ensure that stresses and deflection during storage, handling and transport comply with the requirements of AS 1838.

The following precautions shall be observed:

- (a) Pools shall be transported in a manner that avoids damage.
- (b) Pools shall be stored in an appropriate manner such that no permanent deflection or damage occurs. If hydrostatic relief valves are included, they shall be protected from damage.
- (c) Pools shall be stored to ensure adequate drainage.
- (d) No hard, sharp objects shall be in contact with the pool base.
- (e) Pools shall be secured to prevent movement due to strong winds.

When loaded for transport, pools may be stacked inside each other, however, they should rest on shock resisting blocks on the base of the pool below.

5 INSTALLATION DESIGN CRITERIA.

5.1 Imposed loads. Provision shall be made in the installation design to counteract any additional imposed loads due to specific site conditions.

5.2 Bottom load. Provision shall be made in the installation design to minimize bottom loads and consequently the possibility of flotation when a swimming pool is emptied (see AS 1838).

5.3 Movement of sub-surface water. The installation design shall make provision for minimizing any possible damaging effects of moving sub-surface water. These effects can include erosion of backfill or bedding, and can impose additional loads on the pool.

6 MATERIALS.

6.1 Bedding. The bedding material selected shall be non-cohesive, porous, evenly graded, readily screedable and be of maximum aggregate size of 6 mm.

6.2 Backfill. A suitable backfill shall be used which will not be subject to washaway or slumping behind the pool walls. The choice of backfill will depend on the availability of suitable material, but the backfill shall not include clay or organic soils or other materials subject to seasonal variations, swelling, shrinkage or deterioration.

Suitable materials and methods are as follows:

- (a) Ready mixed cement/sand of minimum ratio 1:16 by volume.
- (b) Ready mixed cement/fine crushed rock, suitably graded, of maximum size 12 mm and of minimum ratio 1:16 by volume.
- (c) Cement/sand (or suitably graded fine crushed rock of maximum size 12 mm) of minimum ratio 1:10 by volume, dry mixed by machine on site.
- (d) Dry hand mixed cement/sand of minimum ratio 1:6 by volume.
- (e) Other materials and methods as specified by the installation design engineer.

7 EXCAVATION FOR POOLS IN THE GROUND.

7.1 Support during excavation.

7.1.1 Permanent support. Where adjacent building footings are located within the zone of influence of the pool, such footings may require permanent underpinning or support down to the level of the pool bottom.

The extent of the zone of influence is dependent on the particular site.

7.1.2 Temporary support. Where the excavation is to be made in unstable soil conditions, or where it could affect adjacent structures and services, adequate temporary support in the form of sheeting and strutting shall be carried out in such a manner as to prevent movement.

7.1.3 Easements. Where the pool is to be installed over an easement or adjacent to an easement, the requirements of all statutory authorities shall be complied with.

NOTE: The owner could be required to sign a form of indemnity accepting responsibility for the subsequent removal of the pool.

7.2 Excavation profile. Where possible, the excavation should follow the contours of the pool with a minimum of 100 mm clearance on the sides and 75 mm under the pool. In special circumstances, where the excavation exceeds 200 mm clearance on the sides, and 150 mm under the pool, the additional fill shall be stabilized to the approval of the installation design engineer prior to installation of the pool.