

*Under Revision See
DR 93282*

Amendments 1 - March 1991

Superseded by AS/NZS 1838:1994

AS 1838—1989

Australian Standard®

Swimming pools—Pre moulded fibre reinforced plastics—Design and fabrication



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.
Department of Health, N.S.W.
Municipal Association of Victoria
Queensland Water Resources Commission
Swimming Pool & Spa Associations of Australia

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STANDARDS AUSTRALIA

Amendment No 1

to

AS 1838—1989

Swimming pools—Premoulded fibre reinforced plastics—Design and fabrication

REVISED TEXT

The 1989 edition of AS 1838 is amended as follows; the amendment(s) should be inserted in the appropriate place.

SUMMARY: This Amendment applies to Clauses 2, 3.7, 6.1.2, 6.2, 6.3, 6.3.3, 7.1 and Table D1.

Published on 28 March 1991.

28 MAR 1991

Australian Standard®

**Swimming pools—Pre moulded fibre
reinforced plastics—
Design and fabrication**

First published as AS 1838—1975.
Second edition 1989.

PREFACE

This Standard was prepared by Standards Australia's Committee PL/41, Glass Reinforced Swimming Pools, under the authority of the Plastics Standards Board to supersede AS 1838—1975, *Premoulded reinforced plastics swimming pools*.

This Standard is technically the same as AS 1838—1975, however it provides a substantial revision of that edition. The need for the pool shell design to take into account the loadings applied by the soils at the location is emphasized, and minimum design characteristics applicable to sand and other soils are given. Revised tests for gel coating and determination of the resin and glass fibre content of the pools are provided.

The installation of fibre-reinforced plastics pools to this Standard is covered by AS 1839, *Swimming pools—Premoulded reinforced plastics—Installation*.

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STANDARDS AUSTRALIA

Australian Standard

Swimming pools—Premoulded fibre reinforced plastics—Design and fabrication

1 SCOPE. This Standard specifies requirements for premoulded plastics swimming pools exceeding 7500 L in volume and 750 mm in depth, and constructed from fibre reinforced plastics (FRP) based on thermosetting resin systems. It covers materials, design and performance requirements.

NOTE: For guidance on installation of swimming pools complying with this Standard reference should be made to AS 1839.

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

| | |
|------------|--|
| AS | |
| 1580 | Methods of test for paints and related materials |
| 1580.602.1 | Method 602.1: Visual assessment of gloss |
| 1839 | Swimming pools—Premoulded reinforced plastics—Installation |
| 1886 | Glossary of terms relating to plastics |
| 2132 | Methods for the determination of the flexural properties of plastics |
| 2818 | Guide to swimming pool safety |
| BS | SEE AMENDMENT 1 |
| 3532 | Specification for unsaturated polyester resin systems for low pressure fibre reinforced plastics |
| ISO | |
| 105 | Textiles—Tests for colour fastness |
| 105-A02 | Part AO2: Grey scale for assessing change in colour |

ASTM D 2583 Test method for indentation hardness of rigid plastics by means of a Barcol impressor

3 DEFINITIONS. For the purpose of this Standard, the definitions given in AS 1886 and those which follow apply:

3.1 Composite—the combination of the cosmetic layer, corrosion barrier, structural layer and outer surface layer (see Figure 1).

3.2 Concrete bond beam—the structural member that supports the pool shell and coping.

3.3 Coping—the horizontal trim or pool edge which is moulded integrally with the pool shell.

3.4 Corrosion barrier—a resin-rich layer immediately beneath the cosmetic gelcoat layer. (See Figure 1.)

3.5 Cosmetic layer—the layer in contact with the water. (See Figure 1.)

3.6 Outer surface layer—the layer which seals the bottom of the structural layer (see Figure 1).

3.7 Structural layer—the main body of the composite supplying the major part of the total strength (see Figure 1).

4 MATERIALS.

4.1 Resin. The resin component of all layers of the composite shall be an appropriate type of unsaturated polyester, epoxide, furan or vinylester resin.

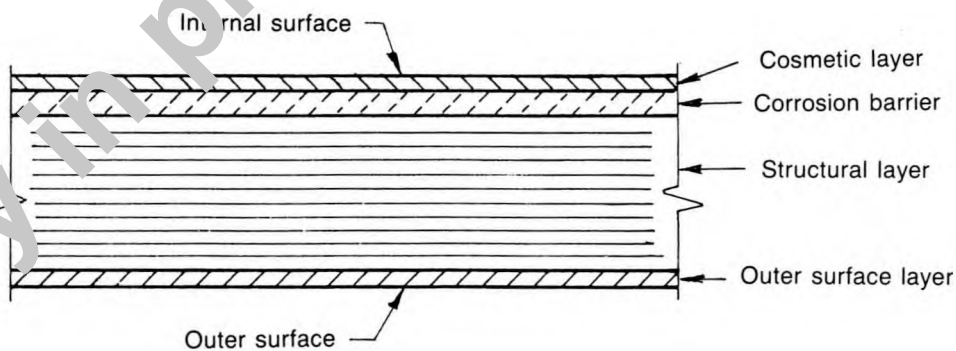


FIGURE 1 IDENTIFICATION OF COMPONENTS OF THE COMPOSITE

AMDT Page 4 Clause 2

No 1
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Specification for unsaturated polyester resin systems for low pressure fibre reinforced plastics