

How to fibreglass and line your pool

Directions for the lining of swimming pools with G.R.P. which apply to the lining of both new and old concrete pools, as well as old pools finished with marble plaster. Both the so called "cosmetic" lining and the lining to re-surface a leaking pool, that has only plaster cracks, are both in fact cosmetic; as the liner is not a structural part of the pool shell, and only provides a water barrier which should be installed on pool shells which conform to NSPI specifications.

Note: An orthophthalic resin not to be used as a pool lining, because its lower strength and inferior resistance to water.

Primer / Seal Coat

A first priming layer of a low viscosity resin to be used to give good penetration into concrete or marble plaster and left for at least four (4) hours to gel before further work is done.

Preparation

The pool must be clear and free from dirt, sand or any residue. Inspect for any defects such as cracks, leaks, crumbling plaster, etc. which must be repaired before application of Primer. **Pool must be dry!**

When the liner is not carried under the coping stones, then a horizontal groove must be cut as high as possible above the water level to a depth of at least 20 mm, which should be dovetailed-shaped and the liner then secured into this groove.

Liner

A wax free chemical resistant thixo tropio pre-accelerated resin is preferred (for safety reasons) and not pigmented: pigmentation masks the presence of air bubbles which must be removed – "A" Type chopped strand mat to be used: a mass per unit area of either 300 g/m or 450 g/m, but the heavier mat will give better results.

Cosmetic Linings

A. Pools in good condition **and in stable ground**, a single layer of 450 g/m can be used.

B. Pools that require repair work, a minimum of mat to be used in two (2) layers of 300 g/m (i.e. 600 g/m).

Resin / Glass Ratio

Must be 3 : 1 by mass i.e. 25 % glass content by mass.

The Lining Operations

The pool surface must be divided into sections each of which can easily be covered with the laminate well within the gel time of the resin batch. The catalyst and content (if resin not pre-accelerated) can be varied to alter gel time at different temperatures. The glass fibre mat must be cut and trimmed to fit the divided sections. Approximately 80 % of the resin should be applied evenly to pool surface, followed by the glass fibre mat which must then be rolled with a metal roller, to ensure consolidation of the laminate and removal of voids. Additional resin can now be applied to obvious "dry spots". The liner must be allowed to gel before application of the top coat. Once walls have been completed, the liner is then applied to the floor, also in sections. Floor to wall joints must be overlaid by a minimum of 100 mm.

Top Coat Resin (Flow Coat)

Must be so catalysed (and accelerated if necessary), to afford reasonable pot life (gel time), at the prevailing temperature and must be stirred thoroughly to ensure uniform distribution of the wax content. Paint brushes or lambswool rollers may be used to apply the flow-coat, which can be pigmented to a white or pale blue colour. Avoid dark colours, they carry the wax bloom. The flow-coat must be allowed to cure fully (approximately 24 hours), before inspection. Any defect areas identified during inspection **must be sanded down to remove wax** surface, washed with styrene and painted over with the flow-coat.

Notes

Construction of the pool liner **must not begin** when air temperature lower than 15°C, nor if there is possibility of rain before completion of the liner.

The PH value of the water should be maintained at **7 ppm at all times**. Chlorine, acid, other pool care additions must always be added in diluted form.

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