



Swimming Pool Waterproofing

SYSTEM FAMILY

Applied waterproofing / continuous immersion

TYPE

Immersion-grade, dual-direction hydrostatic (IS 3370)

NOMINAL BUILD

≥2 mm mesh-reinforced

1. SCOPE & SYSTEM DESCRIPTION

This ADS describes POLYZEN's method for **swimming-pool waterproofing** — a continuously immersed structure under permanent, dual-direction hydrostatic head and chemical (chlorine) exposure, governed by IS 3370.

Delivered as a **POLYZEN Applied System** using immersion-grade (and potable / non-toxic where required) materials, mesh-reinforced to ≥2 mm total build. Cementitious / crystalline systems are favoured for negative-side resistance.

2. SUBSTRATE REQUIREMENTS

- Cured RCC shell; honeycombs, blowholes and tie-holes repaired; active seepage plugged with crystalline / plug mortar.
- Cracks treated; internal angles ready for coving; surface SSD.
- Groundwater dewatered during construction (negative-side pressure pushes in).

3. SURFACE PREPARATION

- Repair the shell and plug all leaks; treat tie-holes and construction joints.
- Round all internal angles (floor-wall, wall-wall, steps) for coving.
- Bring the substrate to SSD; prime / apply crystalline slurry base.

4. ENVIRONMENTAL CONDITIONS

- Apply cementitious immersion systems to an SSD surface; manage groundwater throughout.
- Allow full cure before the fill test; protect from rain during application.

5. MATERIALS

Materials: delivered as a **POLYZEN Applied System** using a client-approved immersion-grade waterproofing system — e.g. 2-component polymer-modified cementitious (immersion grade), cementitious slurry / crystalline (negative-side base), liquid PU / polyurea, GRP or immersion / potable-grade epoxy — reinforced with AR glass-fibre mesh; potable / non-toxic certification where required, selected to suit the project specification and standards. Exact products, consumption, thickness and cure times are per the **selected material's data sheet**. No POLYZEN branded product is required for this system.

6. MATERIALS PREPARATION / MIXING

- Prepare the immersion-grade material strictly per its data sheet to a lump-free consistency; mix full units.
- Confirm potable / non-toxic certification for drinking-water or public pools.

7. APPLICATION PROCEDURE

- **Repair & cove:** complete repairs, plug leaks and form coving fillets at ALL internal angles and steps.
- **Seal penetrations & joints:** individually seal every inlet / outlet, main drain, jet, skimmer and light niche with a chlorine-resistant flexible sealant + fabric collar; use an elastic (never rigid) chlorine-resistant movement-joint sealant.

- **Reinforced membrane:** apply coat 1 (~0.6 mm) with full-field AR-glass mesh → coat 2 at right angles to ≥ 2 mm total.
- **Cure → hydrostatic test → tile:** full cure, then the fill (hydrostatic) test; tile with immersion-grade adhesive + chemical-resistant epoxy grout; refill slowly for service.

8. COVERAGE, LAYERS & FALLS

- ≥ 2 mm total, mesh-reinforced; coats per the selected material's data sheet.
- Floor graded to the main drain / deep-end sump for full emptying; external sub-soil drainage where specified.
- Reference standard: IS 3370 (Parts 1-4), IS 2645; ref. ASTM C1306 / D5385, ANSI A118.10, NSF / potable.

9. CURING & RETURN TO SERVICE

- Full cure before the fill test; adhesive / grout cure 7+ days before final filling — per the selected material's data sheet.

10. FINISHING, PROTECTION & OVERLAY

- Tiling with immersion / chemical-resistant adhesive and epoxy grout; GRP / epoxy may be the finished surface.
- Balancing tank, gutter and overflow waterproofed to the same standard.

11. TESTING & QC CHECKPOINTS

- **Hydrostatic fill test held 7-14 days:** measure the water-level drop against a reference container (discount evaporation); acceptance per IS 3370 Pt 4 ($\approx \leq 5$ mm drop over 7 days, uncovered).
- Verify total thickness, mesh embedment, adhesion and every penetration seal before tiling.

12. DO'S & DON'TS

Do

- Use only immersion-grade (and potable where required) materials.
- Cove and mesh everywhere; build to ≥ 2 mm.
- Manage negative-side groundwater during works.
- Hold the fill test 7-14 days BEFORE tiling.

Don't

- Don't use intermittent-duty coatings — they blister under constant head.
- Don't bridge movement joints rigidly.
- Don't fill rapidly — fill in slow stages.
- Don't skip potable / non-toxic certification for drinking-water pools.

13. MAINTENANCE

- Maintain water chemistry to protect the finish and grout.
- Inspect penetration seals and movement joints at each drain-down.
- Re-treat locally with compatible immersion-grade materials as needed.

14. HEALTH, SAFETY & ENVIRONMENT

- Follow the selected material's SDS; epoxy / PU immersion systems are sensitizers, cementitious systems alkaline.
- Enforce confined-space controls in balancing tanks / deep pools; provide ventilation and PPE.
- Control spills and prevent contamination of water.

POLYZEN INDIA PVT. LTD.

Plot No. 7 & 8, S V Heights, Haritha Vanam Colony Road, Bachupally, Hyderabad, Telangana – 500090
Phone / WhatsApp: 9640126496 | Email: info@polyzen.in | Web: polyzen.in

times are governed by the selected material's data sheet and the project specification. Figures shown are typical/reference values from common Indian and international practice (IS/BS/ASTM). POLYZEN reserves the right to revise this document; the latest version supersedes all previous.