

Koser Guidance on Tanking Internal Concrete Swimming Pools

This Technical Guidance Note provides recommendations for the preparation, waterproofing, and finishing of concrete swimming pools using Koster waterproofing systems.

The procedure is intended to create a durable internal waterproofing barrier.

Surface Preparation

1. Substrate Cleaning

Substrates should be thoroughly cleaned to remove all loose material, contaminants, laitance, and debris. High-pressure water jetting is the preferred preparation method to ensure a sound and clean surface suitable for waterproofing.

2. Inspection and Leak Sealing

Prior to waterproofing, the swimming pool structure should be thoroughly inspected to confirm that no water ingress is occurring. Particular attention should be given to wall-to-floor junctions, construction joints, penetrations, and any areas exhibiting signs of dampness, seepage, or active water ingress. Any defects or leaks identified must be rectified before the waterproofing system is applied.

Where active leaks are identified, these areas should be sealed using the Koster KD System before proceeding with the waterproofing works.

3. Expansion Joints

All expansion joints should be sealed prior to the application of waterproofing materials using:

- Koster Joint Tape 20
- Koster KB-Pox Adhesive

Ensure joints are fully prepared and installed in accordance with the manufacturer's recommendations

Priming

4. Wall and floor surfaces

Prime all prepared wall and floor surfaces using Koster Polysil TG 500 at an application rate of: **200 g/m²**.

Detailing Works

5. Wall/Floor Fillets

Construct curved fillets to all wall-to-floor junctions using Koster Repair Mortar Plus modified with Koster SB Bonding Emulsion.

Consumption Rates:

Koster Repair Mortar Plus: **2 kg** per linear metre fillet with **40 mm leg length**

Koster SB Bonding Emulsion: **1 kg per 25 kg** bag of Repair Mortar Plus

The fillet provides reinforcement at critical junctions and assists in reducing stress concentrations within the waterproofing system.

Waterproofing Application

6. Initial Waterproofing Coat

Apply one brush coat of Koster NB 1 Grey Sealing Slurry to all wall and floor surfaces.

Coverage Rate: **1.5 kg/m²**

Ensure complete and uniform coverage.

7. First Elastic Waterproofing Coat

Trowel apply the first coat of Koster NB Elastic Grey at a rate of: **2.0 kg/m²**

8. Reinforcement of Crack-Prone Areas

While the first coat of NB Elastic remains fresh, trowel apply Koster Glass Fibre Mesh into all crack-endangered areas, including:

- Wall-to-floor junctions
- Wall-to-wall junctions
- Construction joints
- Hairline cracks
- Other areas susceptible to movement

Ensure the mesh is fully bedded into the coating without voids or creases.

9. Second Elastic Waterproofing Coat

Trowel apply a second coat of Koster NB Elastic Grey at: **2.0 kg/m²**.

The second coat should provide complete encapsulation of the reinforcing mesh where installed.

10. Curing

The NB Elastic should not be exposed/subjected to standing water until fully cured.

Minimum curing period: **24 hours**

Surface Re-Profiling

11. Re-Profiling Requirements

Any re-profiling of walls should ideally be completed before application of the NB Elastic. However it is possible to re-profile over the NB Elastic using a suitable sand and cement render incorporating a suitable plasticiser and bonding aid, such as Koster SB Bonding Emulsion.

Do **not** use PVA for this.

Tiling

12. Tile Installation

Once the Koster system has cured, install tiles using:

- Cement-based flexible tile adhesive
- Grout suitable for swimming pool environments

Movement Joint Detailing

13. Expansion Joint Finishing

Where expansion joints were treated in Stage 3, these joints should be carried through the tiled finish.

Following tiling, seal movement joints using:

- Koster FS Primer and/
- Koster FH-V Joint Sealant or/
- Koster FS-H Joint Sealant

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Summary of Material Consumption

Material	Typical Consumption
Koser Polysil TG 500	200 g/m ²
Koster Repair Mortar Plus	2 kg/linear metre (40 mm fillet)
Koster SB Bonding Emulsion	1 kg per 25 kg bag RM Plus
Koster NB 1 Grey Sealing Slurry	1.5 kg/m ²
Koster NB Elastic Grey (1st Coat)	2.0 kg/m ²
Koster NB Elastic Grey (2nd Coat)	2.0 kg/m ²
Total NB Elastic Consumption:	4.0 kg/m ²

Note: Material consumption rates are indicative and may vary depending on substrate condition, profile, and application method. Always refer to the latest manufacturer's technical data sheets before installation.