

WATERPROOFING WORK AT SWIMMING POOLS – EXTERNAL TANKING & SUB GRADE SURFACES USING HIND HYDROFLEX PU

APPLICATION INSTRUCTIONS

STEP - 1

SURFACE PREPARATION

A. General Surface Preparation

1. The surface must be made sound & free from dust, dirt, & loose particles by thoroughly wire-brushing it.
2. If required, a grinder may be used. Clean the dust with a vacuum cleaner.
3. Wash the surface with water. Oils & grease must be removed by degreasing solvent.
4. **Crack Repair (If Required):** If any damage or existing cracks are found on the surface, repair by cutting a 1" V groove & filling with 'Hind Patch R' Fiber Reinforced Repair Mortar (1 Kg Patch-R : 160 gm Water) over a bond coat of 'Hind Styrene BR' admixed with water & cement in the ratio of (1 part Hind Styrene BR : 1 part Water : 3 parts Cement).
5. **Chamfering (If Required):** Chamfer all junctions of the mother concrete slab & brick walls with HIND CRETE PLUS WPM modified cement sand mortar at the ratio of (1 part cement : 4 parts sand : WPM 5-10% weight of cement) after cutting a groove of size 25mm x 25mm.
6. **Pipe Inserts (If Required):** All pipe inserts in floors & walls should be properly sealed with HIND HSMC (1 Kg HSMC : 160 gm water) over a bond coat of epoxy bonding agent HIND BOND EBA modified cement sand mortar.

B. Product-Specific Requirements – Hind HydroFlex PU System

1. **Concrete Curing:** The concrete substrate must be subjected to curing for a minimum of 28 days before commencement of the waterproofing system.
2. The concrete surface over which the coating is to be applied must be structurally sound, clean, dry, & free from loose particles, oil, laitance, & other contaminants.
3. **Joint & Crack Sealing:** Hind PU Sealant must be used to fill in joints or cracks & to form a fillet at internal corners or around pipe penetrations before priming.
4. Ensure the surface is bone dry before application of the primer. Surface moisture content must be within acceptable limits.

STEP - 2

NOZZLE / PRESSURE GROUTING (WHEREVER REQUIRED)

1. Nozzle grouting for injection of cement slurry admixed with Expanding Grout Admixture HIND PLAST EGA at the dosage of 0.5 to 0.6 Kg per 100 Kg cement, with a w/c ratio of 0.36 to 0.4.
2. Pressure grouting should be carried out at all construction joints, water stop locations, pipe penetrations, & any visible cracks or honeycombed areas in the substrate to arrest active water seepage prior to application of the waterproofing system.
3. Allow the grout to cure fully before proceeding with priming & membrane application.

STEP - 3

PRIMING – HIND PRIME PU / HIND ERS PRIME

Application Procedure – Hind Prime PU

1. Hind Prime PU is a ready-to-use, single component product – no mixing is required.
2. Apply Hind Prime PU in a single coat over the clean & dry surface using a brush or roller, ensuring uniform & complete coverage.
3. Apply at a coverage rate of 0.150 L / m² for a 50 micron thickness.
4. **Curing:** Allow the primer to air cure for 5-6 hours at 27°C ± 2°C. Touch dry in 3-4 hours, tack free in 7-8 hours, hard dry in 24 hours. The cured surface is then ready for application of the Hind HydroFlex PU topcoat.

Application Procedure – Hind ERS Prime (Alternative)

5. Mix Component-A (Resin) & Component-B (Hardener) in 1:1 ratio by weight using a mechanical stirrer at 300-350 RPM for 2-5 minutes until a uniform, homogeneous mix is obtained.
6. Apply the mixed Hind ERS Prime uniformly on the well-prepared dry surface using a brush, roller, or airless spray equipment at 150-200 Kg / M² (DFT 200 microns).
7. **Curing before topcoat:** Allow the primer to cure & become tack-free (minimum 6 hours, preferably 24 hours) before applying the first coat of Hind HydroFlex PU.
8. Clean all tools immediately after use with Xylene, Toluene or suitable solvent.

STEP - 4

WATERPROOFING COATING – HIND HYDROFLEX PU (2 Coats)

Mixing

1. Hind HydroFlex PU is a single component, ready-to-use moisture cure system supplied in metal buckets. Stir well before use to ensure uniform consistency. No mixing of components is required.

Application Procedure – First Coat

1. Ensure the primer coat (Hind Prime PU or Hind ERS Prime) has cured fully as per the curing schedule before applying Hind HydroFlex PU.
2. Apply the first coat of Hind HydroFlex PU using a roller & rubber squeeze, working it into the surface to achieve a seamless, self-levelling film.
3. Apply at a coverage rate of approximately 0.75 Kg per m², being half of the total system requirement of 1.5 Kg per m² for 1mm combined thickness on smooth surfaces.
4. **Curing before second coat:** The first coat must be allowed to dry completely (touch dry in approximately 3 hours at 25°C, 65% R.H.) before application of the second coat.

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Application Procedure – Second Coat

- Confirm the first coat has dried completely before applying the second coat.
- Apply the second coat of **Hind HydroFlex PU** uniformly over the first coat using a roller & rubber squeeze, applying in a direction perpendicular to the first coat to ensure uniform film build.
- Apply at a coverage rate of approximately 0.75 Kg per m², so that the combined two-coat system achieves a total of 1.5 Kg per m² for 1mm thickness on smooth surfaces.
- Full Curing:** Allow the complete two-coat system to cure for 7 days to achieve full chemical cure, zero permeability at 7 bar hydrostatic pressure, & full mechanical strength.

Protection & Overlay

- Membrane Protection:** To protect the completed **Hind HydroFlex PU** membrane from damage, a protective layer of screed concrete or cement plaster (as applicable to floor or wall), polystyrene boards, or roofing felt is recommended before any overlay work.
 - Protective Plaster (Walls):** On vertical wall surfaces, the membrane shall be covered with 15mm thick (1:4) cement sand plaster admixed with **HIND PLAST IWA (100 ml for 50 Kg cement)** & **HIND PP FIBER (125 gm for 50 Kg cement)**.
- OR**
- Protective Screed (Floor):** On floor surfaces, the membrane shall be covered with 50–75mm average thick screed concrete (1:2:4) laid in proper slope, admixed with **HIND PP FIBER (125 gm for 50 Kg cement)** & **HIND PLAST IWA (100 ml for 50 Kg cement)**.
 - MANDATORY – Overlay / Tiling Requirement:** As swimming pools are tiled over the waterproofing membrane, one of the following is COMPULSORY before laying tiles: (a) **Hind Bond 1707+** applied as a bonding agent over the membrane, with tiling carried out while the bonding agent is still in TACKY condition, or (b) a Geo textile Membrane of minimum 120 GSM laid over the membrane as a separation/protection layer before tile fixing. Tiling must NOT be done directly on the bare **HydroFlex PU** membrane without one of these layers.
 - Exposed Surfaces:** If the membrane is to be applied to an exposed surface (subject to direct sunlight/weathering), **Hind HydroFlex PU (E)** must be used as the top coat to provide UV resistance.

IMPORTANT NOTES:

- Hind HydroFlex PU** is flexible & withstands structural movement & crack-bridging, making it suitable for pool structures subject to minor substrate movement & hydrostatic pressure variations.
- The system provides Zero Permeability at 7 Bar Hydrostatic Pressure, making it ideal for swimming pools, water retaining structures, & external tanking of basements.
- Pay special attention to waterproofing at pool corners, steps, scum channels, drain outlets, & inlet/outlet pipe penetrations – these areas must be reinforced & sealed with extra care using **Hind PU Sealant** before priming.
- Service temperature range: 0°C to 65°C VOC content is less than 50 g/L, making it an environmentally friendly product.
- Store **Hind HydroFlex PU** & primers in a cool, dry place away from direct sunlight. Do not expose or open containers to high humidity conditions. Shelf life: 12 months (**HydroFlex PU**), 6 months (**Hind Prime PU**).
- Both products are non-toxic; avoid ingestion. In case of skin contact, wash immediately with water. In case of eye contact, wash with water & seek medical advice.

MATERIAL COVERAGE SUMMARY

Product / Layer	Pack Size	DFT / Thickness	Coverage
Hind Prime PU (Primer)	5 / 20 Ltr Container	50 Microns	0.150 L / m ²
Hind ERS Prime (Alt. Primer)	2 / 4 / 20 Kg	200 Microns DFT	0.150–0.200 Kg / m ²
Hind HydroFlex PU – 1st Coat	25 Kg Bucket	~0.5 mm	0.75 Kg / m ²
Hind HydroFlex PU – 2nd Coat	25 Kg Bucket	~0.5 mm	0.75 Kg / m ²
Total HydroFlex PU System (2 Coats)	–	1.0 mm	1.5 Kg / m ² m

IMPORTANT NOTE – SCRATCH COAT / PUTTY COAT:

The application of Epoxy & PU flooring & coatings is highly sensitive to surface conditions. Depending on the substrate porosity, texture, & site conditions, a Scratch Coat/Putty Coat may be necessary over the primer or underlayment surface before applying the final top coat.

A Scratch Coat / Putty Coat is a thin additional layer of the topcoat material, applied to seal any residual surface irregularities, micro-pores, or voids. This step ensures a superior, uniform finish on the final coat by significantly reducing the risk of pinholes, surface defects, & uneven appearance in the cured system.

The necessity of a Scratch Coat / Putty Coat is to be assessed by the applicator based on the actual site surface conditions prior to application of the final topcoat.