

# TIKI AQUASEAL IM 400

## 2K PU based Elastomeric Waterproofing Coating

### DESCRIPTION

**TIKI AQUASEAL IM 400** elastomeric membrane is a high solids liquid applied 2-component coating based on PU chemistry that cures by reaction to give a continuous film, which is rubbery and elastic. It contains leafing pigments, with reinforcing properties.

**TIKI AQUASEAL IM 400** is a very high solids coating designed to give a high-build film. It can be brush or roller or spray applied (with airless spray equipment).

**TIKI AQUASEAL IM 400** cures to a permanently flexible seamless membrane. Since it is elastomeric, it not adversely affected by extremes of atmospheric temperature cycles, consequently it does not crack at low temperatures or suffer thermal blow at elevated atmospheric temperatures.

For protection from UV rays, use of UV resistant coating **DANOCOAT PAS 600 / DANOCOAT PAS 700** is recommended. (refer TDS for technical and application details).

### ADVANTAGES

**TIKI AQUASEAL IM 400** offer the following benefits:

- Chemically cross linked system - free from pin holes and bubble formation.
- Good adhesion with various primed construction substrates.
- Excellent mechanical performance.
- Good root resistance.
- Elastomeric and high crack bridging ability.
- Good low temperature resistance down to (-)30°C.
- Good dirt pick-up resistance.
- Forms seamless elastomeric and impermeable waterproofing layer.
- Excellent stability against hydrolysis - excellent resistance to stagnat water - suitable for waterproofing water bodies such as swimming pool, water tanks etc.

### APPLICATION DATA

Properties	Values
Mix Ratio	As per combo kit
Mix Solids	≥94% by weight
Mix Density	1.30 ± 0.10 g/cc
Pot Life at 25°C**	≈ 35 minutes
Touch Dry at 25°C**	≤ 4 hours
Hard Dry at 25°C**	12 to 24 hours
Full Cure at 25°C	7 days
Recoat ability at 25°C**	4 to 8 hours
Service Temperature	(-)30°C to (+)80°C
Theoretical Coverage*	1.30 - 1.40 Kg./m <sup>2</sup> @ 1mm d.f.t
Recommended Coats	2 to 3 coats depending upon the substrate

\*Coverage is approximate and it depends upon the site conditions and surface porosity at the time of application.

\*\*Pot life and drying time varies depending upon the ambient temperature and humidity.

### PROPERTIES OF APPLIED PRODUCT

Properties	Values*	Test Standard
Tensile Strength	≥6 MPa	ASTM D412
Elongation	≥600%	ASTM D412
Shore A Hardness	≥70	ASTM D2240
Tear Strength	≥35 N/mm	ASTM D624
Water Penetration Resistance at 7 bar	No Penetration	BS EN 12390-8
Adhesion to Primed Concrete	≥2.50MPa	ASTM D7234
Static Crack Bridging	≥3mm	EN 1062-7(A)
Puncture Resistance	≥300 N	ASTM E154
Elastic Recovery	≥80 %	ASTM D412
Resistance to Root	Pass	CEN TS/4416

\* Mentioned values are tested on 14 days cured film of 1.50mm average thickness under ideal laboratory conditions. Test results achieved from testing of site-applied samples may vary and depends on the circumstances which are beyond our control, viz: variation in sample preparation, film thickness, test temperatures and conditions, manual errors, etc.

## USES

Ideal for waterproofing following areas under protection:

- Non-Exposed Concrete Roofs, Metal Deck Roofs, Terraces, Podiums, and Concrete Decks.
- Water Tanks and Swimming Pools.
- Terrace Garden, Landscape and Planter Boxes.
- Flyover and Bridge Decks.
- Basement and Retaining Wall.

## APPLICATION

### SURFACE PREPARATION

Before starting the application, check for the adequate weather and substrate conditions.

- Concrete surface – sound and at least 28 days old.
- Ambient & substrate temperature between 5°C - 35°C.
- Substrate surface moisture below 5%.
- Temperature of the support, at least 3°C above the dew point temperature.

Using conventional methods, clean and remove all laitance, foreign matter, dirt, oil, grease, curing compound, loose particles and other contaminants which may impair adhesion of primer and subsequent coats with the substrate.

All existing cracks and expansion joints shall be treated with **TIKISEAL PU** range of polyurethane sealant.

The existing surface undulation and irregularities should be grinded to smooth even profile and cleaned. Based on the project requirement and site conditions, surface undulation / irregularities should be filled with epoxy putty / mortar over a tacky prime coat of **DANOPRIMER I-EPS**, the epoxy putty / mortar prepared using **DANOPRIMER I-EPS** and quartz silica sand mixed in following proportion by weight (**DANOPRIMER I-EPS Resin** : **DANOPRIMER I- EPS Hardener** : Quartz Silica Sand- 100 : 50 : 150 to 300).

For metal surface, surface profile of SA2 to SA2.5 is required and the same shall be achieved using power tools and / or grit blasting cleaning process to thoroughly clean surface free from loose rust, oil, grease, dust etc.

### SURFACE PRIMING

Depending upon the site conditions, prime the prepared concrete / metal surface with suitable Epoxy based or Polyurethane based primer recommended by TIKIDAN.

On very absorbent or porous substrate, it is highly recommended to apply second coat of primer.

If the time is lapsed for more than 24 hours after application of primer, abrade the primed surface to provide mechanical key to subsequent coats.

Allow the applied primer to dry.

### MIXING OF MATERIAL

**TIKI AQUASEAL IM 400** is supplied as pre-weighed two components, ready to use at site in combo pack.

Prior to mixing, stir Part-B component (Pigmented) for 3-5 minutes to get homogenous material (Since the material contains fillers, it may get settled at bottom of container).

Pour the previously stirred Part-B component of **TIKI AQUASEAL IM 400** in to a separate container and start mixing gradually by pouring Part-A component under gradual mixing for 3-5 minutes using slow speed mechanical drill with paddle attachment to achieve homogeneous and uniform coloured mix. Never add Part-B component to Part-A component.

Ensure that there is no entrapment of air bubbles during mixing of components.

Over the fully cured waterproofing coating, spread

## APPLICATION

All corner, seams, splits, control joints, verticle / horizontal interfaces, roof termination points, openings, transition areas, around the base of all vents pipes and other protrusions, as well as around HVAC units and other roof mounted equipment shall be reinforced with 120mm wide thermoplastic elastomer coated alkali resistant fabric waterproofing tape **TIKIFLEX 1001**, the reinforcing layer sandwiched between the two coats of **TIKI AQUASEAL IM 400** waterproofing, the waterproofing tape embedded in first waterproofing coat when wet.

All preparation materials including primers shall be allowed to dry thoroughly prior to application of the **TIKI AQUASEAL IM 400** coating.

### ON HORIZONTAL SURFACE

Apply prepared mix of **TIKI AQUASEALIM 400** as soon as the applied primer is dry. Apply **TIKI AQUASEAL IM 400** by brush or roller or airless spray Minimum two coats are recommended, the second coat applied perpendicular to first coat after first coat is dry.

Actual coverage/consumption of material and number of coats required to build the required thickness on horizontal and vertical surfaces varies with project requirements and surface profile and it should be established on the site by doing the site mock-up/trials.

Day work joints: Where application of waterproofing coating extends over more than a working day, the subsequent coats should overlap the previous coats by at least 150 mm.

### PROTECTION OF WATERPROOFING ON HORIZONTAL SURFACE

The applied waterproofing coating on horizontal surface should be protected from U.V and pedestrian traffic with screed concrete.

separation layer of 200 gsm non-woven polyester geotextile **DANOFELT PY I-200**, maintaining overlap of 50mm in both directions.

Over separation layer, as per the project requirement concrete screed of M20 admixed with integral waterproofing liquid **DANOMIX LW** @200ml per 50 kg of cement shall be laid to provide a slope of at least 1 in 150 for the storm water run-off. This screed will also provide required protection to waterproofing system. The minimum thickness of screed at any point shall not be less than 50 mm. The screed shall have nominal reinforcement of 6mm at 300 c/c or shall be done with SFRC (steel fibre reinforced concrete).

### PROTECTION OF WATERPROOFING ON VERTICAL SURFACE (Parapet Wall of Terrace Areas)

The applied waterproofing coating on parapet wall of terrace area should be protected from U.V damage. Fine sand @ 200 to 300 g/m<sup>2</sup> should be sprinkled over the final coat of waterproofing, when the final coat is still tacky to provide mechanical key and facilitate plastering.

Allow waterproofing coating to attain full cure. Finally protect vertical application with at least 15-20mm cement-sand plaster admixed with integral water proofing liquid **DANOMIX LW** @150ml per 50 Kg. cement.

### PROTECTION OF WATERPROOFING ON VERTICAL SURFACE (Basement Wall / Retaining Wall)

The applied waterproofing coating should be protected from damage during backfilling operations by protecting with HDPE dimple protection boards **DANODREN** / XPS board **DANOPREN** / bituminous protection board **TIKIDAN PRO-BOARD**, the protection boards spot bonded with waterproofing layer using double sided self-adhesive tape, self-adhesive pins or instant setting adhesives.

## SAFETY PRECAUTIONS

## CLEANING

Immediately after application, use suitable solvent for cleaning application tools.

## SUPPLY

**TIKI AQUASEAL IM 400** is supplied in available Combo Pack consisting of Part-A Component and Part-B Component. It has a shelf life of 12 months when stored under covered shed in dry and original sealed condition.

## STORAGE

**TIKI AQUASEAL IM 400** must be stored between 5°C to 40°C and humidity below 75% in dry area. Store under the covered shed and protect from extremes of temperature, heat, direct sunlight, humidity, ignition sources, naked flame and sparks.

As with all chemical products, care should be taken during use and storage of **TIKI AQUASEAL IM 400** to avoid contact with eyes, mouth, skin and foodstuffs until product is fully cured or dried.

Keep away from flames, sources of ignition, sparks, children and animals.

Do not reuse containers for storage of consumable items.

Do not smoke during use.

### VERSION: R6, 202403

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