TIKI HYDROSEAL-SF

Pre-Applied Fully Bonded Sand Faced HDPE Membrane

DESCRIPTION

TIKI HYDROSEAL-SF is pre-applied fully bonded sand faced HDPE waterproofing membrane composed of multi-layer composite that effectively forms a complete and permanent bond & seal with freshly poured concrete against it for unparalleled performance.

TIKI HYDROSEAL-SF multi-layer composite comprises of a tough, resilient and high strength HDPE waterproofing membrane layer, self-adhesive polymer layer and a unique novel particulate layer.

TIKI HYDROSEAL-SF is specially designed to bond fully and permanently with poured concrete against it.

TIKI HYDROSEAL-SF membrane can be installed on uniform concrete blinding surface or on well compacted earth surface or on sandstone cushion surface for waterproofing of below ground surfaces. Also, it can be installed on vertical formwork on confined sites allowing efficient use of spaces.

TIKI HYDROSEAL-SF complies to IS:16471:2017 Type A and BS 8102 Type A as Barrier Protection.

PROPERTIES

Property	Values		Standards
Total Thickness	1.2mm	1.5mm	ASTM D3767
Tensile Strength	≥25 MPa		ASTM D412
Elongation at Break	≥ 550%		ASTM D412
Peel Adhesion to Concrete	≥ 1500 N/m		ASTM D903
Puncture Resistance	≥ 1000 N		ASTM E 154
Resistance to Hydrostatic Head	71m @ 1Hour (No Leakage)		ASTM D5385
Low Temperature Flexibility	(-)29^{O}C @2 Hour (No Cracks)		ASTM D1970
Lap Peel Adhesion*	≥ 1500 N/m		ASTM D1876
Lateral Water Migration Resistance	71m @ 1Hour (No Leakage)		ASTM D5385

*Tested after 24 hours of lap sealing.

USES

- For waterproofing and protection of concrete foundations, basements, underground concrete structures, and blindside walls, against aggressive ground contaminants.
- For preventing methane, moisture & water ingress into underground concrete structures.

ADVANTAGES

- Suitable for installation on wet surfaces requiring no heating, primer or fillet.
- High resistance to soil chemicals and corrosive salts–protects structure from aggressive ground conditions preserving structural integrity.
- Waterproofing performance remains unaffected by differential movement & settlement beneath the concrete slab.
- Advanced adhesive technology forms continuous & permanent integral bond with concrete poured against it, ensuring waterproofing performance for the life of the structure.
- Prevents lateral migration of water between waterproofing layer and concrete.
- Physically isolates the structure from the surrounding ground and forms complete barrier to water, moisture and gas.
- Does not require protection screed – installation of reinforcement bars can start immediately after membrane installation.
- Inert to below ground conditions and all types of soil and water – does not undergo swelling or phase change in contact with ground water or wet concrete pour.
- Zero maintenance and high durability ensures lower life cycle costs.
- Installation on permanent formwork enables efficient use of confined sites.
- Robust and strong enough to withstand pressure from concrete pour and backfill material.

APPLICATION INSTRUCTIONS

All surfaces should be sound and solid for installation of **TIKI HYDROSEAL-SF** membrane to prevent movement during the concrete pour. Substrates must be uniform and smooth and there shall be no gaps or voids in surface greater than 12mm.

All penetrations such as utility conduits, penetrations etc., should be properly grouted for stability.

HORIZONTAL CONCRETE BLINDING OR PCC

The substrate must be sound, smooth and uniform free of all unsound / loose aggregate, sharp objects, protrusions etc. Avoid curved or rounded substrates.

For installation of **TIKI HYDROSEAL-SF** membrane, the surface can be dry / wet, but there should not be standing water on surface.

VERTICAL SHEET PILING

TIKI HYDROSEAL-SF can be used for blind side waterproofing applications. Prior to installation of **TIKI HYDROSEAL-SF** on blindside, gunite / shotcrete concrete or plywood or insulation or any other suitable material should be installed and use as approved facing to sheet piling to provide uniform support for membrane installation.

Board systems such as timber lagging, if used as support must be close butted with not more than 12 mm out of alignment.

MEMBRANE INSTALLATION

During installation in cold weather or high humid conditions, it is recommended to pre-heat / gently warm the selvedge area of membrane and also the surface area of **TIKI TAPE–SF / TIKI TAPE BI-ADHESIVE** using hot air gun to remove surface moisture / condensed moisture and subsequently improve adhesion.

TIKI HYDROSEAL-SF should be installed at 5°C & above.

TIKI HYDROSEAL-SF should be overlapped at side and end laps and overlapped area rolled using suitable roller to ensure complete bonding and continuity. The testing of integrity of the lap seal can be done after 24 hours of lap sealing.

After installation of **TIKI HYDROSEAL-SF** care should be taken to avoid damage to membrane.

Before the concrete pour, it is recommended not to work / travel on top of laid waterproofing membrane.

On vertical surface, prior to back-filling, laid membrane should be protected with approved protection course.

INSTALLATION ON HORIZONTAL SUBSTRATES

During installation, **TIKI HYDROSEAL-SF** is placed on the approved substrate with adhesive / coated side facing the installer / concrete pour.

The **TIKI HYDROSEAL-SF** waterproofing sheets are placed starting at lowest point of slope and with the laps always in favour of water flow.

While laying the waterproofing sheets, no other works shall be carried out in the vicinity to prevent waterproofing sheets from possible damage.

TIKI HYDROSEAL-SF membrane sheets are provided with selvedge on longitudinal side for providing enhanced sealing at overlap.

The succeeding waterproofing sheets shall be accurately positioned and aligned along the marked selvedge of previous sheets.

The transversal overlap should be placed staggered relative to each other, at least by 30cm.

Care should be taken to ensure that, once the sheets are aligned, it should be prevented from displacement from its aligned position.

Maintaining membrane previous alignment, install the membrane by simultaneously rolling the membrane sheet in to place and peeling-off the release film from the selvedge area to overlap with successive sheet.

Ensure the underside of the succeeding sheet is clean, dry, and free from contamination before attempting to overlap at selvedge area.

Press the overlapped area firmly against the support using a pressure from suitable roller and smoothen from the centre towards the edges to drive out entrapped air.

At end laps, before sealing the overlaps, unique novel particulate layer should be scrapped-off by ≥75mm width to allow for adhesion of subsequent sheet using **TIKI TAPE BI-ADHESIVE**.

Continue installing membrane until entire area is covered.

INSTALLATION ON VERTICAL SUBSTRATES

Mechanically fasten the membrane vertically using fixings (i.e. fasteners) appropriate to the substrate with adhesive / coated side facing installer / concrete pour.

The membrane may be installed in any convenient length. Secure top of membrane using a batten such as a termination bar or fixing 50 mm below top edge.

Fixings can be made through the selvedge so that the membrane lays flat and allows firmly rolled overlaps.

Immediately remove the plastic release liner from selvedge. Any additional fixings must be covered with a patch of **TIKI TAPE BI-ADHESIVE**. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to seal the overlap.

Roll firmly to ensure a watertight seal. Overlap side and end laps by at least 75mm.

At end laps, before sealing the overlaps, unique novel particulate layer should be scrapped-off by ≥75mm width to allow for adhesion of subsequent sheet using **TIKI TAPE BI-ADHESIVE**.

CORNERS

Internal and external corners should be formed as per the detailing, returning the membrane a minimum of 100mm and sealing with **TIKI TAPE BI-ADHESIVE**. Ensure that the edges of corners are covered and sealed with tape rolled firmly.

SUPPLY

TIKI HYDROSEAL-SF is supplied in standard roll sizes of 1.2m x 20m of 1.2mm and 1.5mm thickness.

STORAGE

TIKI HYDROSEAL-SF membranes must be stored above 5°C. Store under the shed & protect from extremes of temperature.

Rolls must be stored in upright vertical position. Avoid stacking of rolls horizontally on their sides or in double stack position.

SAFETY PRECAUTIONS

As with all synthetic products, care should be taken during use and storage of **TIKI HYDROSEAL-SF.**

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