

Hydrofin® PreFix Plus-PF

Pre-Applied Fully Bonded HDPE pressure sensitive adhesive below-grade Waterproofing Membrane that bonds integrally to poured concrete.

Description:

Sterling® HydroFin® PreFix Plus-PF is a high-performance fully bonded HDPE film aggressive pressure-sensitive adhesive membrane that allows poured concrete to bond fully with the membrane. Sterling® HydroFin® PreFix Plus-PF comprising of a virgin HDPE layer, coated with a high bond strength adhesive, and covered with a release liner, for below ground waterproofing of reinforced concrete structures that bonds directly to poured concrete with the membrane, thus forms a unique integral seal around the concrete poured against it, prevents water ingress even under high hydrostatic pressure and prevents lateral water migration as well.

Sterling® HydroFin® PreFix Plus-PF is loose laid onto prepared substrates or formwork before fixing reinforcement and casting concrete. The adhesive layer is activated when the concrete is poured on the surface and forms a permanent bond with the fresh concrete which will prevent the ingress of water around the structure. Reinforcement can be directly laid on top of the membrane and it does not require screed protection.

Standard compliance: British Standard 8102:2009 & Indian Standard 16471:2017- code of practice for "Protection of Structures against Water from the Ground".

Application Includes:

Sterling® HydroFin® PreFix Plus-PF is intended for use in below grade waterproofing applications such as Basement waterproofing protection to grades 1,2 and 3 as defined in BS 8102: 2009 & IS 16471 : 2017 and confined retaining walls with high water table and cut & cover structures (e.g. tunnels) and allows efficient use of confined sections.

Features & Benefits:

Excellent adherence to poured concrete:	Prevents later water migration between concrete and membrane.
Unaffected by hydrostatic pressure:	High resistance to hydrostatic pressure thus can be used in high water table areas.
Unaffected by Contamination:	Does not require any special protection during construction can be easily cleaned with water and high-pressure air.
Permanently bonds to structural concrete:	Advanced adhesive technology forms continuous and permanent integral bond with concrete.
No membrane protection required:	Does not require protection of reinforcement bars can start immediately after membrane installation.
Fully Adhered to Poured Concrete:	Prevents later water migration between concrete and membrane.

Method of Application:

Surface Preparation:

The Substrate should be sound and solid to ensure consistency while pouring concrete. Substrates must be regular and smooth with no protrusions or gaps. The surface should be free of loose aggregate and sharp protrusions. The membrane surface should be free of any standing water prior to the application. All penetrations such as utility conduits, penetrations etc., should be properly grouted for stability.

Membrane Application:

Horizontal Areas: HydroFin® PreFix Plus-PF is unrolled and placed in position. Each roll is overlapped by next layer by 75mm. Use TechnoFix® SecureSeal Tape, for transversal end laps and cut joint to 100 mm width. All overlaps and joints should be firmly rolled to ensure complete adhesion between layers.

Vertical Areas Without working space: HydroFin® PreFix Plus-PF Membrane to be used for all vertical section, where the retaining wall is abutting the shored or gunnited or piled surfaces. The membrane to be dropped down on to the vertical surfaces and anchored mechanically.

With working space: TechnoBit® Selfshield, self-adhesive bituminous, cross laminated with HDPE, membrane is applied on to the vertical surfaces. The membrane is applied by removing the release film and pressing firmly on to the surfaces by roller.

Corners: Internal and external corners should be formed as per the detailing, returning the membrane a minimum of 100mm and sealing with **TechnoFix® SecureSeal** Tape. Ensure that the edges of corners are covered and sealed with tape rolled firmly.

PROPERTIES	TYPICAL VALUE	TEST METHOD
Total Thickness	1.2mm & 1.5mm	ASTM D3767
Elongation	>500 %	ASTM D 412 Modified
Tensile strength, film	≥ 25 MPa	ASTM D 412
Puncture Resistance	≥1000 N +/-5%	ASTM E 154 modified
Resistance to hydrostatic head	≥ 70 mtr	ASTM D751-06 (2011)
Lateral water migration resistance	71 mtr @23°C	ASTM D 5385 modified
Low Temperature Flexibility	no crack @-25°C	ASTM C765
Peel Adhesion to concrete	>880 N/m	ASTM D903 Modified
UV exposure test @45 days	No change	ASTM G153
Lap joint strength	13.5 N/mm	ASTM D1876
Linear Dimensional change(Dimensional Stability)	0.1%	ASTM D1204

*Clarification of property values: The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary.

Resistant to soil chemicals:	Can be used in all soil and sub-soil conditions, even if contaminated with salts.
Fully adhered watertight laps:	Ensures water tightness.
Strong bond:	Robust and strong enough to withstand pressure from concrete pour and backfill material.
Value engineered:	Pre-applied fully bonded waterproofing system for underground structures & High resistance to tears and punctures.
Durable:	Zero maintenance and high durability ensures lower life cycle costs.
Simple and Easy Install:	Installation on permanent formwork enables efficient use of confined sites, Does not require special tools and welding techniques.

Shelf Life:

The shelf life is 36 months if stored as per the recommendations. In a covered and secured storage space.

Storage:

Sterling® HydroFin® PreFix Plus-PF 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.

Cleaning:

All tools should be cleaned immediately after application on using fresh water. Hardened materials must be cleaned mechanically.

Health & Safety Instructions:

Protect your health while working with this material, always use safety goggles, gloves and safety clothing. When handling hazardous materials or pressurized materials, or during any application that may result in spills, splashes or airborne particles, a full face shield is strongly recommended. Protect yourself and others on the jobsite. Consider property in proximity of the application area to prevent loss or damage.

***Further protection:** emergency showers and eyewash stations. Get immediate medical attention as needed.

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General Instruction: When laying adjacent full rolls there should be a stagger to avoid a buildup of end joints in one area.

Removal of formwork: Where the membrane has been applied to removable shuttering it is recommended that a minimum concrete compressive strength of 10 N/mm² is reached before the formwork is stripped.

Penetrations: Penetrations e.g., pipe entries through Sterling® HydroFin® PreFix Plus-PF require special attention to detail. Refer to Sterling Technotrade's technical team for more information on details.

Backfilling: Preferably membrane should be protected from suitable protection boards before backfilling to avoid damages to the membrane. Backfilling material must be free from sharp objects and debris that could damage the HydroFin® PreFix Plus-PF. It should not contain house bricks, blocks or boulders larger than 50mm.

Ancillary Products

TechnoFix® SecureSeal Tape: Double-side Adhesive Flashing tape has two layers of adhesive which bond respectively to the HDPE surface. The specially developed TechnoFix® SecureSeal Tape work together to form a continuous and integral seal to the structure. TechnoFix® SecureSeal Tape is a 100mm wide tape used in detail areas including end laps and various tie-ins. It is also used to patch damaged areas in the HydroFin® PreFix Plus-PF.

Installation of TechnoFix® SecureSeal Tape:

End Overlaps: Keep the TechnoFix® SecureSeal Tape clean and protect it from being contaminated from dust before use. After laying the HydroFin® PreFix Plus-PF, cut the release liner at 100mm for the end overlap, unroll the tape and remove the release film and adhere to the end laps of the membrane. Use heavy hand pressure or a hand roller to maximise adhesion. Then remove the PE release film and overlap with the second membrane. It is recommended that concrete be poured within 45 days of application of the tape. The concrete must be placed carefully and consolidated properly to avoid damage to the membrane. Never use a sharp object to consolidate the concrete. Provide temporary protection from concrete over splash for areas of the tape that are adjacent to a concrete pour.

Exposure and Protection

Following the application and inspection, care should be taken to prevent damage by following trades. Any punctured or damaged areas should be cleaned and patched using TechnoFix® SecureSeal Tape with minimum 50mm laps all around.

Estimating

HydroFin® PreFix Plus-PF: Roll size: 1.2 x 20m & 2.4 x 20m

TechnoFix® SecureSeal Tape: Roll size: 10 Mt x 100mm

Disclaimer: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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