BUILDING TRUST

PRODUCT DATA SHEET

SikaProof®-312 IN HDPE

PRE & POST APPLIED HDPE SELF-ADHESIVE MEMBRANE WITH RELEASE LINER FOR BELOW GROUND WATERPROOFING

DESCRIPTION

SikaProof®-312 IN HDPE is a unique HDPE based self-adhesive membrane 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. It is loosely laid onto prepared substrates or formwork before fixing reinforcement and casting concrete.In pre applied applications 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. For post applied applications it is directly bonded with the substrate by stripping off the release liner at the bottom and fixing on the PCC below before casting the raft slab

USES

SikaProof®-312 IN HDPE can be used for damp-proofing, waterproofing and concrete protection for basements, subway, tunnel and other below ground concrete structures against ground water ingress. Suitable for use on:

- Reinforced concrete base slabs
- Reinforced concrete walls with single and double-faced formwork
- Reinforced concrete footings and grade slab
- Extension and reconstruction works
- Prefabricated structures

CHARACTERISTICS / ADVANTAGES

- Pre-applied: Fixed before placing reinforcement and casting concrete
- Post-applied: Fixed after placing reinforcement and casting concrete and allowing it to cure for 28 days minimum
- Can be applied on damp or green concrete, gives good bonding with fresh concrete (Pre-applied)
- High flexibility and crack-bridging capabilities
- No lateral water migration between the concrete structure and the membrane system
- High watertightness tested according to various standards
- Fully and permanently bonded to the reinforced concrete structure
- Not affected if the level of water table rises and falls
- Resistant to aggressive conditions in natural ground water and soil
- Easy to install with selvedge on one side to provide self-adhered laps for continuity between rolls
- Made up of non-recycled / virgin HDPE for long durability
- Temporarily resistant to weathering and UV exposure during construction
- VOC free, eco-friendly material
- Sound anti-puncture performance
- Adaptable to settlement and distortion
- Can be combined with other approved Sika® Waterproofing / Joint Sealing Systems

PRODUCT INFORMATION

Chemical base	HDPE sheet membrane with adhesive layer, and covered with release liner
Packaging	1.2 m x 20 m rolls in a PE foil

Appearance / Colour	HDPE side	White
	Adhesive side	Off white
Shelf life	12 months from the date of production	
Storage conditions	Product must be stored in original unopened and undamaged sealed packaging in dry conditions and temperatures between +5 °C and +30 °C. Protect from direct sunlight, rain, snow and ice, etc. Store in a horizontal position. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage.	
Product Declaration	Bonded sheet membrane according to IS 16471 : 2017	
Effective Thickness	HDPE film	~0.80 mm
	HDPE membrane composite	~1.20 mm

TECHNICAL INFORMATION

Resistance to Static Puncture	≥ 1000 N	(ASTM E154)
Tensile Strength	≥ 20 MPa (film)	(ASTM D412 mod)
Elongation	≥ 550 %	(ASTM D412 mod)
Tensile Adhesion Strength	≥ 900 N/m after 28 days(*) (*): Pre-applied	(ASTM D903)
Joint Peel Resistance	≥ 1500 N/m	(ASTM D1876)
Watertightness	> 60 m of hydrostatic head	(ASTM D5385 mod)

APPLICATION INFORMATION

Ambient Air Temperature	+5 °C min. / +40 °C max.
Substrate Temperature	+5 °C min. / +40 °C max.

SYSTEM INFORMATION

System Structure	The following system products may be used: ▪ SikaProof® Sandwich Tape-100 IN, Double sided self-adhesive tape for HDPE membranes Ancillary products: ▪ Accessories and complementary products are available to provide detailing and connection solutions

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTS

Sika® Method Statement: SikaProof®-312 IN HDPE

IMPORTANT CONSIDERATION

- Installation work must only be carried out by Sika® trained, approved or competent contractors experienced in this type of application.
- Reference must also be made to the Sika® Method Statement: SikaProof®-312 IN HDPE System for more detailed information.
- Do not install SikaProof®-312 IN HDPE membrane during continuous or prolonged rain, snowfall or sandstorm.
- The substrate application surface must be clean with no standing water.
- If SikaProof®-312 IN HDPE is to be applied under wet conditions or temperatures below +5 °C. Exceptions are possible under special circumstances with appropriate precautions. Contact Sika® Technical Services for more information.
- Additional Sika® Joint Sealing Solutions (minimum SikaSwell®) must be used for connections, around penetrations and for construction and expansion joints.
- SikaProof®-312 IN HDPE membrane is not permanently UV and weather resistant. Therefore, the membrane system must not be installed on structures

where it will be permanently exposed to UV light.
- Ensure that release liner is fully removed before placement of concrete.
- Contamination of adhesive layer may affect the bonding of concrete, hence remove the liner after reinforcement is installed just before placing concrete or protect the adhesive from severe contamination.
- Concrete must be placed within 21 days after membrane system installation.(Pre-applied)
- Adequate concrete quality (mix design and workmanship) is required to achieve optimum adhesion of the membrane system to the concrete.
- After formwork removal, the membrane system (membrane side) must be protected with appropriate protection sheets as soon as possible or at the latest before backfilling or within 45 days after installation.
- Suitable ancillary systems such as spray applied coatings, liquid applied membranes, preformed modified membranes may be used in vertical and detailing applications. Please seek advise on these transitions from Sika® Technical Services.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

- Measuring tape
- Marking pen
- Razor knife
- Scissors
- Pressure roller
- Clean lint-free cloth
- Metal straight edge for cutting
- Hot air gun (Leister Triac)

SUBSTRATE QUALITY

SikaProof®-312 IN HDPE membrane must be applied on a sufficiently stable substrate to avoid movement during the construction works. Substrate surface must be smooth, uniform and clean. Large gaps and voids (≥ 12–15 mm) must be filled before membrane installation. Substrate can be damp or slightly wet, ponding water must be avoided. Suitable membrane fixing substrates include:
- Concrete blinding
- Formwork
- Rigid thermal insulation
- Plywood sheets / form
- Shotcrete
- Dimpled sheet drainage board

APPLICATION METHOD / TOOLS

Installation procedure

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Installation method - General (For both Pre & Post Applied)

After substrate conditions have been fulfilled, the waterproofing membrane is installed by loose laying onto horizontal / inclined substrates or fastening onto vertical substrates.

Longitudinal and transverse joints

Side lap joints of SikaProof®-312 IN HDPE are sealed by overlapping the membranes by 80–100 mm and removing release liner in longitudinal direction. Transverse joints shall be sealed by removing the release liner and then overlapped by 80 mm. Use rollers to release air pockets within joints to ensure proper sealing and bonding. The selvedge adhesive can be heated by hot air gun to remove moisture or condensation and improve initial adhesion in cold conditions.

Installation method - Detailing

Form all details and connections using the appropriate SikaProof® ancillary products outlined in the Sika® Method Statement: SikaProof®-312 IN HDPE.

Construction and expansion joints

For sealing these types of joints, use additional Sika® Joint Solutions.

Inspection and quality control of installation

A final inspection before placing concrete must be carried out to ensure the complete membrane system has been correctly installed, any damage repaired, and the surface of the adhesive layer is clean.

Concrete placement(Pre-applied)

The release liner must be removed just before the concrete placement or carefully before placement of reinforcement, ensure protection of contamination of adhesive. Place concrete directly onto or against the membrane within 21 days after installation. No mortar or protection screed must be used before placement of reinforcement and concrete.

Formwork removal

After removing the formwork, all penetrations such as shuttering anchors, any membrane damage and construction joints must be sealed using the appropriate SikaProof® ancillary products or complementary Sika® Waterproofing Systems.

Backfilling protection

After formwork removal and before backfilling, SikaProof®-312 IN HDPE system must be protected with an appropriate protection sheet as soon as possible or at the latest within 21 days.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users can always refer to the most recent version of the local Product Data Sheet for the relevant product, available on our website. The information in any downloaded version is valid as of the time of download.

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