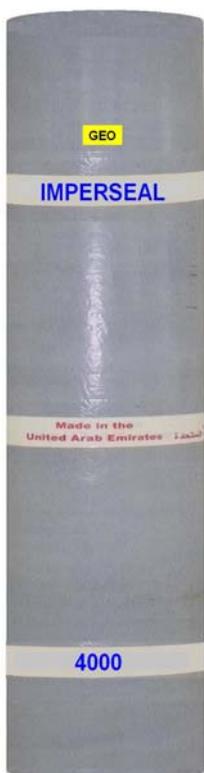


IMPERSEAL 4000 GEO



Cold applied, self-Adhering Waterproofing Membrane for Sub-Structure Protection.

IMPERSEAL 4000 GEO are factory fabricated waterproofing sheets of predetermined thickness of 2.0, 2.2 & 3.0mm self-adhesive waterproofing membrane mechanically protected by a factory applied, UV resistant, polyester geotextile, to provide a superior water proofing and protection membrane for underground concrete structures under faced with a siliconised release film.

DESCRIPTION

IMPERSEAL 4000 GEO provides high puncture, tear and impact resistance therefore is capable of withstanding site abuse.

QUALITY ASSURANCE

Imperbit Membrane Industries' Management system is registered to ISO 9001 standards.

USES

IMPERSEAL 4000 GEO membrane is designed to provide protection to bitumen based self-adhesive membrane and coatings used for protection of foundation walls and below grade structures. The specially formulated bituminous compound is unaffected by corrosive salts and dilute acids found in ground water.

SURFACE FINISH

The upper surface of **IMPERSEAL 4000 GEO** comes with a 200 GSM tough polyester geotextile along with 10 cm wide strip of siliconized release film for bitumen to bitumen contact at side seams. The lower surface is totally covered with siliconized release film, providing a flat surface total bonding during application.

TOOLS FOR FIXING

Knife, Measuring tape, Roller, Marking Aids and Gloves.

SALIENT FEATURES

- Protection membrane for self-adhesive bitumen membrane.
- Puncture resistance
- Flat adhering surface
- Uniform thickness
- Higher elasticity
- Longer life expectancy

APPLICATION METHOD

SURFACE PREPARATION: Care should be taken that surfaces to be waterproofed are completely clean, totally dry, smooth, level and free from loose material. Any sharp protrusions such as nails, tying wire, etc. must be removed and all cracks, holes, spilled and damaged surfaces filled and repaired. All external corners must be chamfered.

Priming: IMI CONCRETE PRIMER is a solvent based liquid primer that greatly enhance adhesion of bituminous water proofing membrane to substrates. The primer conform to the requirement of ASTM D-41 TYPE 1. The solvent based primer first penetrates and then coats the concrete surface sealing pores and on drying creates a fine layer of bitumen. The fine layer allows for a superior bond between membrane and substrate.

Alignment: Start the installation of membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of **IMPERSEAL 4000 GEO** membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting.

APPLICATION: Bond **IMPERSEAL 4000 GEO** over the self-adhesive membrane by pressing the underside. Stagger lap joints and side lap from the base layer **IMPERSEAL 4000 GEO** membranes are applied by positioning the roll over the self-adhesive membrane peeling the siliconized release film about one meter at a time, while pressing the adhesive surface to the self-adhesive membrane. The membrane is pressed from mid-point to the edges in order to expel any trapped air and to ensure good contact. The adjacent roll is then positioned so as to overlap the fixed membrane by at least 100-mm along the edge. The selvage strip provided at the edge of the fixed membrane is then peeled back one meter at a time while fixing the second roll in the same manner as the first. End laps must be minimum 100-mm wide & joints should be staggered. However, the end over laps will be butt jointed using **IMPERSEAL 7000 SRF** (double sided self-adhesive membrane) as the bitumen will not adhere to the polyester fleece. Cut **IMPERSEAL 7000 SRF** in a strip off 200 mm and use as double sided tape. Which shall be laid on that area prior to the application of the membrane. Once the bitumen strip is put in place, remove the silicon release film from the top and expose the self-adhesive surface. The **IMPERSEAL 4000 GEO** membrane shall then be applied on top of the exposed **IMPERSEAL 7000 SRF** overlapping by 100mm. The subsequent membrane will then be overlapped with the other 100 mm of **IMPERSEAL 7000 SRF**.

All seams must be pressed from the top using a heavy seam roller to ensure total strong contact and continuity at the seams. Inspect the fixed membrane to ascertain that all joints are properly executed and all air is expelled from under the membrane.

CORNERS AND TERMINATION: Use fillets or cant strips at all internal corners and chamfer external Corners before applying the membrane. Apply a 600-mm wide reinforcing strip of Self-adhesive membrane over the Corners followed by the full membrane. Top edges of the membrane should be terminated in a chase on Vertical surfaces, followed by a suitable bituminous mastic sealant.

PROTECTION: Once laid, the membrane must be protected from long-term exposure, construction abuse and backfill, within 48 hours.

BACK FILLING

Back filling against vertical walls can proceed immediately.

PROPERTIES		Typical Values	METHOD OF TESTING
Nominal Thickness (mm)		2.0, 2.2 & 3.0	UEAtc, ASTM D 751
Surfacing Core		200 GSM spun bond polyester	UEAtc
Length of roll		15 mtr	
Puncture Resistance		>700 N	ASTM E 154
Elongation Compound		>1000 %	ASTM D 412
Resistance to Hydrostatic Pressure		70 m	DIN 1048
Tensile Strength	Longitudinal	700 N/5cm	UEAtc
	Transversal	400 N/5cm	ASTM D 828
Elongation	Longitudinal	30 %	UEAtc
	Transversal	40%	
Tear Strength	Longitudinal	450 N	UEAtc
	Transversal	370 N	ASTM D 828
Adhesion Strength		50 N/inch	ASTM D 1000

HANDLING PRECAUTIONS: IMPERSEAL 4000 GEO membranes have no health hazard when used with our standard application recommendations. IMI CONCRETE primer contains a flammable solvent with flash point of 42°C. Use primer in well ventilated areas away from sources of direct heat or ignition. Inhalation must be avoided and the use of protective clothing, rubber gloves, goggles and barrier cream is recommended. Do not use solvent to clean skin. After work clean hands with soap and warm water or suitable mild detergent. Obtain immediate medical advice if redness or skin irritation appears. In case of mouth or eye contact, flush immediately with fresh water and seek medical advice.

STORAGE: IMPERSEAL 4000 GEO rolls are shipped upright on wooden pallets. The roll must be kept upright at all times. Storage of Imperseal rolls should be in a well-ventilated and covered storage area. Membranes should be stored away from a source of direct heat. If ambient temperatures at storage site fall below 10°C, the rolls should be exposed to warmer temperatures of 10°C to 40°C for periods of upto 2 hours prior to use to facilitate ease of application and good bond to the substrate. Do not stack more than 1 high. IMPERSEAL 4000 GEO has a shelf life of 12 months from date of production, if stored in a cool, dry store in original unopened packing.

PACKING: IMPERSEAL 4000 GEO membranes are palletised and shrink-wrapped at the factory.

Product Name	IMPERSEAL 4000 GEO	
Thickness (mm)	2.0, 2.2	3.0
Rolls per pallet (Nos.)	25	25
Nominal Roll Length (mtrs)	15	10

The technical data given here are the average results of tests carried out in our laboratory on the IMPERSEAL 4000 GEO membrane. IMI reserves the right to change or modify the data without prior notice. All reasonable care has been taken in compiling the data that to the best of our knowledge is accurate and true. All recommendations are made in good faith. IMPERSEAL 4000 GEO membranes are warranted to be free from manufacturing defects for a period of 10 years. No responsibility can be accepted by us and no warranty is implied with regard to any of the recommendations made in this data sheet, since the conditions of actual use and the labour involved are beyond our control. IMPERSEAL 4000 GEO membranes are not affected by chlorides, sulphates & phosphates as well as dilute acids found in ground water.

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