

POLYDEK

ELASTOMERIC, SINGLE COMPONENT WATER-BASED WATERPROOFING MEMBRANE

DESCRIPTION

Polydek is a high performance, liquid-applied waterproofing membrane of styrene acrylic polymer. It consists of a very elastic polymer with the inherent flexibility that allows the membrane to accommodate movements in the substrate. It works as a seamless membrane that performs and adapt to any construction requirements in varied climatic conditions.

Polydek is especially formulated to seal, waterproof and decorate exterior surfaces & roofs. It seals cracks and joints in old or new roofs /walls and simultaneously leaving a seamless finish to the roof surface. Due to its versatility, it can be practically applied to any supported substrates like concrete, asbestos cement, fibre cement and on existing membranes.

USES

- Fire Walls
- Concrete slab roofs
- New & old roofs / walls
- Car porch roofs
- Fibre cement boards
- Gutters

ADVANTAGES

- **Waterproofing** - Prevents further ingress of water in old and new concrete.
- **Vapour Permeability** - Allow vapour transmission to release moisture.
- **Durability** - Enforced with fibre glass matt increases film tensile strength and wear resistance.
- **Flexible** - Polymeric characteristics enable bridging of hairline cracks and accommodate minor joint movements.
- **Weather Resistant** - Excellent resistance to ultraviolet degradation.
- **Trafficable** - Able to withstand regular foot traffic.
- **Cost Effective** - Repairs damaged concrete by direct application without additional re-construction.
- **Ease of Application** - Brush, roller or airless spray applied. **Solvent Free** - Operators do not need extra respiratory protection.
- **Recoating** - After 5 – 7 years, recoating can be done to the surface with a refresher or another finish coat.
- **Ease of Maintenance** - Fungus & mold are free on apply surfaces

PRODUCT PROPERTIES

Colour	White, Grey, Black, Light Green
Polymer Content (%)	64%
Density	1.2kg/litre of fresh liquid membrane
Adhesion to Substrate (N/mm ²)	1.1 (ASTM D4541 : 2009)
i) Applied on concrete with fibreglass	>6.0Mpa (Cohesive B) ASTM D4541
ii) Applied on concrete without fibreglass	> 6.0Mpa(cohesive B) ASTM D4541
Water Vapour Transmission	27g/m ² (ASTM E96:2005)
Maximum Tensile Strength	4.6N/mm ²) (ASTM D412 – 2006a)
Elongation At Break	431%(ASTM D412 – 2006a)
Crack Bridging (mm)	2 No cracks was observed (ASTM C836:2006)
Dirt Retention	
Dirt Collection Index DC	(SS500 : 2002)
a) Before Washing	91
b) After washing	92
c) Visual Assessment	No water spotting
Weather resistance	UV Resistant (ASTM G 53)
Solid content %	68.03% (ASTM 2369)
Durometer Hardness (Shore A)	53 (ASTM D2240-05)

COVERAGE

Specification for walls and firewalls

The system consists of the following sequence;

1. 1 coat of Greenshield Primer (0.1litre/m²)
2. 1 coat of Polydek (0.3litre/m²)
3. 1 coat of Polydek(0.3litre/m²)

The finished coating will approximately provide 0.4mm film thickness.

Specification for concrete and roofs

The system consists of the following sequence;

1. 1 coat of Greenshield Primer (0.1litre/m²)
2. 1 coat of Polydek (0.3litre/m²)
3. 1 layer of Fibremesh
4. 1 coat of Polydek(0.3litre/m²)
5. Final 1 coat of Polydek (0.3litre/m²)

The finished coating will approximately provide 0.8mm film thickness.

NOTE:

* 3 hours is needed for the drying of each coat of Polydek before the application of the next coat.

* Coverage and Thickness is theoretical and may vary due to different substrates.

Application with Greenseal Fiber Mesh

GS Fibre Mesh is a non-woven fibre mesh fabric used as reinforcement in the application of liquid waterproofing where substantial movement is anticipated. It is designed so as to allow polydek to pass through, thereby forming a compact reinforced sandwich membrane upon application problem between the top and bottom layers should a high force be applied on it.

Application for using Greenseal Fiber Mesh is as follows:

- Where a layer of polyester fiber mesh is used as reinforcement for better tensile strength of membrane. It shall be laid onto the 1st coat of Polydek before it is totally dry to enable it to adhere onto the 1st coat and leave to dry. The 2nd coat Polydek should apply when is tarry dry.
- For better tensile strength use in conjunction with Greenseal Fiber Mesh.

FEBRE MESH PROPETIES

DESCRIPTION		RESULT
Weave:		Plain
Material (Tex):	Warp:	22 x 1 x 2
	Weft:	44
Density (counts/inch):	Warp:	20
	Weft:	10
Unit weight (g/m ²)	Raw:	54±5
	Finished product	60±5
Content of resin:		≥ 14%
Tensile strength (N/50mm):	Warp:	≥650
	Weft:	≥320
Tensile strength after 28days conditioning in 5% NaOH:	Warp:	≥50% of original
	Weft:	≥50% of original

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Ensure all surfaces are clean and free from dirt, oil, grease, efflorescence, fungi growth, loose particles and laitance. As for horizontal surfaces must be cast to fall as Polydek will be finishing product to avoid ponding on Polydek surfaces.

Hack off honeycombs to expose concrete. Remove all chipped and loose particles and clean surface before repairing.

Lastly, repair all hacked off areas with Greenseal Injection Grout / Greenseal 300 mortar.

Ensure new concrete is at least 3 days old before application of Polydek.

Angle Fillet

- Form an angle fillet of 25 X 25mm with Greenseal Injection Grout / Greenseal 300 at all junctions between slabs and walls.
- Mix 3 parts of Greenseal Injection Grout / Greenseal 300 to 1 part water and mix thoroughly to a mortar consistency and apply with trowel to form the angle fillet.

Outlet Pipe Penetration

- Hack a V groove joint with a depth of 25mm surrounding the outlets and pipes.
- Wash thoroughly the hacked areas to expose the clean concrete surfaces between the outlet pipe and the concrete.
- Mix 3 parts of Greenseal Injection Grout / Greenseal 300 to 1 part water and mix thoroughly to a mortar consistently and apply with a trowel into the hacked V groove and level it to the concrete level.

PRIMER

Apply Greenshield Primer to unpainted clean surfaces for better adhesion.

For painted surfaces, remove all flakes of paint before applying Greenshield Primer.

APPLICATION METHOD

Application for 1 coat Greenshield Primer + 2 coats Polydek

1. Thoroughly clean concrete surfaces free of oil, grease, paint and loose dust, mud and laitance and hose down concrete surfaces thoroughly.
2. Polydek shall be applied in minimum 1 coat Greenshield Primer + 2 Coats Polydek for wall surface.
3. The Greenshield primer coat shall be applied at the rate 0.1litre/m² with a proper roller ensuring that all surface of the concrete surface is covered.
4. When the primer coat is dry and can accept foot traffic without lifting up of material when step on. This would at least be 2 to 3 hours after the primer coat application.
5. Over the Primer coat, roll a first coat of Polydek at the rate of 0.3litre/m² on top of the primer coat.
6. Wait for the first coat Polydek to be dry at least 3 to 4 hours later.
7. Then applied the second coat (top coat) of Polydek at the rate of 0.3litre/m² per coat and then wait for the Polydek dry.

Application for 1 coat Greenshield Primer + 3 coats Polydek

1. Thoroughly clean concrete surfaces free of oil, grease, paint and loose dust, mud and laitance and hose down concrete surfaces thoroughly. Polydek can be applied by using brush or roller over the entire surfaces.
2. The first coat Greenshield primer shall be applied at the rate 0.1litre/m² with a proper roller ensuring that all surface of the concrete surface is covered.
3. Then applied the first coat of Polydek at the rate of 0.3litre/m² per coat and then wait for the greenshield primer dry for at least 3 hours minimum before the application of the first coat of Polydek.
4. Wait for the first coat Polydek to be dry at least over night or 3 hours minimum and then only applied the second coat of Polydek at the rate of 0.3litre/m² per coat.
5. Finally apply the final coat (top coat) of Polydek is to be applied at the rate of 0.3litre/m² per coat and leaving it to cure for at least 3 hours.

Application with Reinforce Fiber Mesh

1. Thoroughly clean concrete surfaces free of oil, grease, paint and loose dust, mud and laitance and hose down concrete surfaces thoroughly. Polydek can be applied by using brush or roller over the entire surfaces.
2. The Greenshield primer shall be applied at the rate 0.1litre/m² with a proper roller ensuring that all surfaces of the concrete surface is covered. Then wait for 2 hours for it to dry.
3. Then applied the first coat of Polydek at the rate of 0.3litre/m² per coat. While the first coat Polydek still wet, lay the Polyester Fiber Mesh over it and ensuring it all flatten and not ringers occurs. Then wait for the first coat Polydek to dry at least 3 hours and apply the second coat of Polydek at 0.3litre/m². It is important roll the second coat with sufficient material to cover the Fiber Mesh.
4. When the third coat Polydek is dry, then apply the final coat (top coat) of Polydek at the rate 0.3 litre /m² and ensuring all the Fiber Mesh are covered and no holes appears. Leaving it to cure for at least 3 hours.

MIXING

No mixing is required.

CURING

Allow 24 hours between coats. A final curing time of 48 hours is adequate at normal working temperatures. Ensure curing is complete before laying thermal insulation boards, mechanical protect and other coverings.

Low Temperatures and high atmospheric humidity will slow down the curing rate, and vice versa.

RECOATING

Recoating is required after 5-7 years, the membrane surface can simply be cleaned and re-coated with a refresher or single top coat.

CLEANING EQUIPMENT

Clean equipment with soapy water followed by rinsing with clean water. Flush mineral spirits through the spray equipment to prevent rust.

PACKAGING AND APPEARANCE

- 5 & 20 litre /pail
- Colours - White, Grey, Black, Light Green (Special color are available through request to Greenseal office.)

STORAGE AND SHELF LIFE

Polydek has a shelf life of 12 months. Keep containers tightly closed and away from ignition sources. Do not expose it to direct sunlight or leave it too long in the open air.

PRECAUTION

Do not apply Polydek if weather is imminent before the coat is dry thoroughly, or when temperature is expected to drop below 5°C.

Newly applied Polydek should be protected from rain, extreme heat and moisture during the first few hours.

Please contact Greenseal Products (M) Sdn Bhd for further technical assistance.

HEALTH, SAFETY AND CLEANING

It is recommended that the applicator wears a safety goggles and gloves. Avoid prolonged contact with exposed skin, and keep away from mouth and eyes. In case of skin contact, wash areas with soap and water. If contact with eyes, rinse thoroughly with clean water. Seek medical attention immediately if irritation persists.

Guarantee

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. GREENSEAL reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorized by us. Our guarantee covers exclusively the quality of the manufactured product. We will not accept any responsibility exceeding the value of the purchased product.

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