

EKOGUARD

EKOGUARD are APP modified bitumen reinforced roofing and waterproofing membranes

DESCRIPTION

EKOGUARD membranes are made by saturating and coating a reinforcement core with a homogeneous thermoplastic blend of APP (Atactic Polypropylene), distilled bitumen and stabilizers. The mixture is carefully produced under controlled conditions to ensure its thermal stability at high temperatures and flexibility at low temperatures.

EKOGUARD membranes are impermeable to water & easy to apply.

QUALITY ASSURANCE & MATERIAL WARRANTY

Imperbit Membrane Industries' Management system is registered to ISO 9001 standards & all **EKOGUARD** membranes carry a 10 year material warranty. In addition to stringent regular test by IMI laboratory, our products are also tested periodically by independent laboratories.

REINFORCEMENT

A variety of reinforcement cores are used in the production of the **EKOGUARD** range, these include 200 gr./m² & 270 gr./m² spun bond polyester and fiberglass tissue.

SURFACE FINISH AND SIZE OF ROLL

The top surface of the membrane is covered with a thin layer of PE film or sand. The bottom surface is covered with Printed PE IMI design film.

The membranes are produced in thickness of 3mm, 4 mm and 5 mm and in a standard length of 10 mtrs And 1 mtr width.

EKOVENT Venting sheet are available in thickness of 2.0mm & 2.6mm, EKOGUARD DPC is available as a base sheet in thickness of 2.6mm or 3mm.

USES

EKOGUARD membranes are ideal for general use in single or multi-layer systems. They may be used in low slope concrete roofs, balconies, multi storey car parks, for lining sewerage canals, sub-grade structures and any concrete or cemented flat surface that needs waterproofing.

EKOGUARD – DPC/Base sheet membranes are ideal for general use in civil construction as a damp-proof layer or as a base sheet under cap sheets in exposed or inverted roofing systems. EKOGUARD-DPC are available in thickness of 2.6mm & 3.0mm reinforced with 60 GSM fiberglass tissue.

EKOVENT-vapour control venting base sheet eliminates the formation of bubbles and blisters on the membrane roofing system by diffusing the vapour through the roof area, and then venting it to atmosphere through aerators. EKOVENT are available in thickness of 2.0mm & 2.6mm reinforced with 80 GSM Perforated fiberglass tissue.

EKOGUARD – DR are double reinforced membranes for waterproofing of large decks where dimensional stability is required under severe cyclic conditions.

EKOGUARD – 270 membranes are recommended for heavy duty applications.

TOOLS FOR FIXING THE MEMBRANE

Gas torch for welding, related cylinder, knife for trimming the membrane, a trowel with a rounded tip, marking aids and gloves.

APPLICATION

The surface to be waterproofed must be completely cleaned and free of dust, oil, protruding nibs, nails etc. A coat of IMI Concrete Primer is then applied to the concrete surface at the rate of 200 – 300 gr/m². The primer must be allowed to dry completely before fixing the membrane. **EKOGUARD** waterproofing membranes are fixed by torch welding the underside. The membrane rolls are lined up and spread open over the area to which they are to be fixed, starting at the lowest point on a roof-deck. The rolls are laid so that they overlap each other by at least 10cms along the side lap, lap-joints should shed water towards drains. The membranes are then rolled back without changing the given orientation. They are then unrolled once again while heating the underside sufficiently to cause surface melting. End laps should be a minimum 15 cms. Avoid excessive and uneven application of heat. The lap joints should be heated from the top to produce a thin bead of molten bitumen at the seam; the bead is then smoothed out with the trowel, ensuring a properly welded joint.

EXPOSED ROOFING SYSTEM

For exposed application, skirting and flashings, **EKOGUARD** membranes are used. These are produced with a self-protecting layer of natural or colored slate flakes. The membranes are provided with a selvedge 10 cms wide that is granule-free. This facilitates the forming of lap joints. End of roll joints are made by scraping off 15cm of mineral flakes or heating 15 cms of the mineral surface sufficiently to press-in the slate and expose the bitumen. The next roll is then torched to the bitumen of the exposed area.

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 **EKOGUARD** 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.



Properties		EKOVENT Venting sheet	EKO GUARD DPC/Base sheet	EKO GUARD -200	EKO GUARD DR -260	EKO GUARD -270	Method of Testing
Reinforcement core		80 gr/m ² perforated glass fibre tissue	60 gr/m ² glass fibre tissue	200 gr/m ² Polyester	200 gr/m ² Polyester & 60 gr./m ² glass fibre tissue	270 gr/m ² Polyester	UEAtc, MOAT 31: Para F
Nominal thickness of membrane (mm)		2.0 & 2.6	2.6 & 3	3, 4 & 5	4 & 5	4 & 5	UEAtc , ASTM D 5147
Tensile Strength N/5cm	Longitudinal	N/A	300	950	900	1150	UEAtc
	Transversal		200	650	700	950	
Tensile Strength kN/m	Longitudinal	N/A	4	16	18	20	ASTM D 5147
	Transversal		3	10	12	16	
Elongation, %	Longitudinal	N/A	3	44	35	45	UEAtc , ASTM D 5147
	Transversal		3	48	40	50	
Tear Resistance	Longitudinal	N/A	N/A	190	200	200	UEAtc
	Transversal			200	220	220	
Tear Strength,N (Notch method)	Longitudinal	N/A	N/A	500	650	600	ASTM D 5147
	Transversal			350	500	500	
Puncture resistance	Static Indentation	N/A	L ₂	L ₄	L ₄	L ₄	UEAtc
	Dynamic Indentation		I ₂	I ₄	I ₄	I ₄	
Puncture resistance, N		N/A	N/A	900	1000	1000	ASTM E 154
Resistance to Hydrostatic pressure		N/A		>7 bar(>70M)			DIN 1048, ASTM D 5385
Flexibility at low temperature		- 5 ^o C				UEAtc	
Dimensional Stability		± 0.5% (L/T)				UEAtc, ASTM D 5147	
Softening Point *		155 ^o C				UEAtc, ASTM D 36	
Penetration @25 ^o C *		20 dmm				UEAtc, ASTM D 5	
Heat resistance @ 100 ^o C		No flow				UEAtc	
Water absorption @ 24 hrs.		< 0.20 %				ASTM D570	

* Compound Properties (Tested during manufacturing process)

The technical data given here are the average results of tests carried out in our laboratory on the **EKO GUARD** 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. **EKO GUARD** 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. **EKO GUARD** membranes are not affected by chlorides, sulphates & phosphates as well as dilute acids found in ground water.

Packing Configuration:

- 3P-PBS/SAND 28 rolls per pallet
- 4P-PBS/SAND/DR 23 rolls per pallet
- 4P MINERAL 20 rolls per pallet
- 5P-PBS/MINERAL/DR 16 rolls per pallet

Nominal roll length for above products = 10 mtrs
 For EKOVENT- 20 rolls per pallet and 20 mtrs length
 For EKO GUARD DPC- 20 rolls per pallet and 20 mtrs length

Indicative Loading Capacity for 4mm thickness:

552 Rolls per 40 ft Trailer / 468 Rolls per 20 ft Container

Product generic name:

- APP B-3P-PBS/SAND; APP B-4P-PBS/SAND
- APP B-4P-MINERAL; APP B-5P-PBS/MINERAL

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HANDLING PRECAUTIONS: **EKO GUARD** membranes have no health hazard when used with our standard application recommendations. IMI CONCRETE primer contains a flammable solvent with flash point of 42^oC. 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:

Rolls must be kept up right at all times, in a covered well-ventilated storage area, away from sources of direct heat. If ambient temperatures at storage site fall below 15^oC, the rolls should be exposed to warmer temperatures of 15^oC to 40^oC for periods of upto 2 hours prior to use to facilitate unrolling of the membranes. If stacking is necessary, ensure that rigid sheet of plywood is placed between the pallets. Do not stack more than 2 high. **EKO GUARD** membrane has a shelf life of 12 months from the date of production, if stored in a cool, dry store in original unopened packing.

