

IMPERFLEX (S)

IMPERFLEX (S) membranes are SBS modified bitumen waterproofing membranes designed to provide sub-structure concrete surfaces with perfect waterproofing protection.

SALIENT FEATURES

- General purpose torch-applied membrane protection for sub-grade concrete.
- Excellent elongation and recovery properties.
- Superior flexibility and pliability.
- High bonding strength to self and substrates.

DESCRIPTION

IMPERFLEX (S) membranes are made by saturating and coating a reinforcement core with a homogenous thermoplastic blend of SBS (Styrene-Butadiene-Styrene), distilled bitumen and stabilizers. The elastomeric compound is carefully produced under controlled conditions to ensure its thermal stability at atmospheric temperatures and flexibility at very low temperatures. **IMPERFLEX (S)** membranes are impermeable to water, very flexible and easy to work around contours and protrusions.

REINFORCEMENT

A Variety of reinforcement cores are used in the production of the IMPERFLEX (S) range, these include 150, 180, 200, 270 Gr/m² non-woven spun bond polyester, glass fiber tissue and combination of the two.

QUALITY ASSURANCE

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

STANDARDS

IMPERFLEX (S) membranes are tested in accordance with UEAtc MOAT 27-1983 & ASTM D 5147.

SURFACE FINISH AND SIZE OF ROLL

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

The membranes are produced in thickness of 2.0, 2.2, 3, 4 & 5mm and in a standard length of 10 mtrs and 1 mtr width.

USES

IMPERFLEX (S) Base sheet membranes are ideal for general use in civil construction as damp-proof layer or as a base sheet under cap sheets in exposed or inverted roofing systems. **IMPERFLEX (S)** is available in thickness of 2.0mm, 2.2mm & 3.0mm reinforced with 60Gr/m² fiberglass.

IMPERFLEX (S) membranes are used for waterproofing of foundations and basement tanking. They are used to dress pile caps, tie beams and for the waterproofing of rafts.

They are easily workable around contours and protrusions. **IMPERFLEX (S)** membranes are also used in the waterproofing of roof slabs in inverted roof systems.

TOOLS FOR FIXING THE MEMBRANE

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

APPLICATION

The surface to be waterproofed must be completely cleaned and should be 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 application of the membrane. **IMPERFLEX (S)** membranes are fixed by torch welding. Make side laps minimum 10 cm & end laps 15 cm. SBS membranes are generally soft, and therefore care should be taken when applying heat to the underside or when making a lap joint, which should be heated from the top to produce a thin bead of molten bitumen at the seam, which should then be smoothed out with the trowel, ensuring a properly welded joint.

EXPOSED ROOFING SYSTEM

For exposed application, skirting and flashings, **IMPERFLEX (S)** mineral 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. A minimum of 250-mm wide reinforcing strip of **IMPERFLEX (S)** is recommended 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	FG	150	180	200	270	DR	DR-Plus	Method of Testing	
Reinforcement Core (Gr/m ²)	60 Glass fiber	150 non-woven spunbond polyester	180 non-woven spunbond polyester	200 non-woven spunbond polyester	270 non-woven spunbond polyester	200 non-woven spunbond polyester +60 glass fiber	250 non-woven spunbond polyester +60 glass fiber	UEAtc, MOAT 31: Para F	
Nominal thickness of membranes	2,2,2,3 & 4 mm	3 & 4 mm	3 & 4 mm	3,4&5 mm	4 & 5 mm	4 & 5 mm	4 & 5 mm	UEAtc, ASTM D 5147	
Tensile Strength N/5cm	Longitudinal	350	650	800	900	1050	950	1200	UEAtc
	Transversal	200	450	550	700	850	700	900	
Elongation, %	Longitudinal	3	45	45	50	50	50	50	UEAtc
	Transversal	3	50	50	55	55	55	55	
Tear Strength, N (Notch Method)	Longitudinal	250	400	450	500	600	600	750	ASTM D 5147
	Transversal	150	300	350	450	500	450	600	
Puncture Resistance, N		120	700	900	1000	1250	1000	1300	ASTM E 154
Puncture Resistance	Static Indentation	L ₃			L ₄			UEAtc	
	Dynamic Indentation	I ₃			I ₄				
Resistance to hydrostatic pressure, bars (M)	>4 (40)	> 7 (70)				ASTM D 5385, DIN 1048			
Flexibility at low temperature, °C					- 5 to -10			UEAtc	
Heat resistance @ 80 °C					No Flow			UEAtc	
Resistance to thermal ageing					Passes			UEAtc, ASTM D 5147	
Softening Point, °C *					110			UEAtc, ASTM D 36	
Penetration @ 25°C, dmm *					25			UEAtc, ASTM D 5	
Water Absorption @ 24 hrs (%)					0.20			ASTM D 570	

* Compound Properties (Tested during manufacturing process)

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

Packing Configuration:

IMPERFLEX (S)-3P-PBS/SAND 28 rolls per pallet
 IMPERFLEX (S)-4P-PBS/SAND 23 rolls per pallet
 IMPERFLEX (S)-4P-MINERAL 20 rolls per pallet
 IMPERFLEX (S)-5P-PBS/SAND/MINERAL 16 rolls per pallet
 Nominal roll length for all above products = 10 mtrs

Indicative loading capacity for 4mm thickness:

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

Product generic name

SBS TE -3P-PBS/SAND
 SBS TE -4P-PBS/SAND
 SBS TE -4P-MINERAL
 SBS TE 5P-PBS/SAND/MINERAL

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HANDLING PRECAUTIONS: IMPERFLEX (S) 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:

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 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 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. **IMPERFLEX (S)** membrane has a shelf life of 12 months from the date of production, if stored in a cool, dry store in original unopened packing.

