

## SIM PENGUEN APP-MODIFIED MINERAL SURFACE MEMBRANES (-5°C)

This product is a plastomeric bituminous waterproofing membrane made from modified bitumen containing Atactic Polypropylene (APP) and reinforced with fiberglass or polyester felt to enhance mechanical resistance. Top side is coated with colored reflective mineral and back side with a polyethylene film. It has a cold flexibility value of -5°C.

### Areas of Usage

On all terrace and sloped roof surfaces of all structures;



SLOPED ROOF



TERRACE

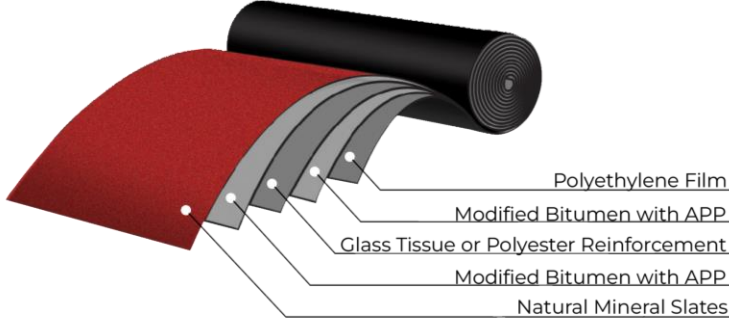
- On flat, sloped, vault, dome, and similar roofs,
- On various surfaces such as wood, reinforced concrete, metal, etc.,
- On vertical/horizontal surfaces of non-walkable terraces,
- In pavilions, garden sheds, and canopies,
- In challenging details such as chimney flashings, gutters, hidden gutters, and expansion joints,

It can be used as the final layer in many economical and aesthetic solutions for waterproofing details.

### Advantages

- SIM Penguen Mineral Surface Membranes, with one side covered in colored mineral, are high performance products designed as a final layer to provide waterproofing solutions for all types of details in wooden, reinforced concrete, and metal roofs.
- It adheres perfectly to the applied surface and provides excellent adhesion.
- When used with appropriate methods and adequate protection, it lasts for the lifetime of the building.
- Preferred in hot, warm and moderately cold climate zones, SIM Penguen APP-Modified Mineral Surface Membranes protect the membrane from ultraviolet rays with their colored minerals, preventing the bitumen from melt and flow in high-temperature conditions. Additionally, they do not crack or break in cold weather, extending the lifespan of the membrane. The final layer provides a suitable solution for applications requiring UV resistance.
- It demonstrates the necessary elasticity for application with its tensile strength (length and width) values against structural movements. It is highly resistant to structural movements and differences in expansion.
- It provides an economical and practical solution. It is very easy and quick to apply with a welding torch flame. It can be cut to the desired size and shape using special cutting blades.





## Storage

- Bituminous membranes should be stored vertically in enclosed spaces.
- Pallets should be stored without stacking on top of each other and should be stored in a single layer.
- They should not be exposed to direct sunlight and should be protected from sudden temperature changes.

# PRODUCT TECHNICAL DATA SHEET

FEATURES	UNIT	TEST METHOD	SP 40 AR	SP 45 AR	SP 50 AR
Reinforcement (Carrier)			Polyester	Polyester	Polyester
Weight	kg/m <sup>2</sup>	-	4	4,5	5
Roll Width	m(±0,2)	EN 1848-1	1	1	1
Roll Length	m(±0,2)	EN 1848-1	10	10	10
Visible Defects		EN 1850-1	None	None	None
Joint Slip Resistance	N/5cm	EN 12317-1	≥300	≥300	≥300
Heat Resistance	C°	EN 1110	≥110	≥110	≥110
Cold Flexibility	C°	EN 1109	-5	-5	-5
Tensile Strength (Length/Width)	N/5cm	EN 12311-1	600/400	600/400	600/400
Elongation at Break (Length/Width)	%	EN 12311-1	30/30	30/30	30/30
Tear Resistance (Length/Width)	N	EN 12310-1	≥150/≥150	≥150/≥150	≥250/≥250
Static Load Resistance	kg	EN 12730	≥15	≥15	≥15
Impact Resistance	mm	EN 12691	≥1500	≥1500	≥1500
Dimensional Stability	%	EN 1107-1	Max. 0,6	Max. 0,6	Max. 0,6
Fire Reaction	Class	EN 13501-1	E	E	E
Top Coating			MINERAL	MINERAL	MINERAL
Back Coating			PE	PE	PE

## Application

- Bituminous waterproofing membranes should be applied after being kept covered at the application site for 24 hours. (Conditioning)
- Waterproofing applications with bituminous membranes should be carried out at temperatures between a minimum of +5°C and a maximum of +35°C and above, in dry weather conditions and on dry surfaces.
- The surfaces to which waterproofing will be applied should be smooth and even, and they must be cleaned of dirt or residues, such as oil and diesel, that could harm the waterproofing.
- Reinforced concrete surfaces should be primed with SIM Primer and, after drying, the waterproofing membranes should be applied according to the required bonding method.
- All membrane layers should be laid in the same direction. The transverse joints of the first layer membranes should be staggered. The joints of the second layer membranes should be centered over the longitudinal and transverse joints of the first layer.
- The transverse overlaps of the bituminous membrane should be 10 cm, and the longitudinal overlaps should be 15 cm, applied by heating with a welding torch flame.



## Standards / Certifications

