

Specifications of waterproofing membrane

Product	Unit	Phoenixflex®	Phoenixflex® Gold	Phoenixflex® Silver	Phoenixflex® Bronze
Bitumen Type	-	Bitumen modified with SBS	bitumen modified with SBS and APP	bitumen modified with SBS and APP	bitumen modified with APP
Reinfor cement	-	230 gr Polyester	140 gr Polyester	two layers of tissue and polyester	two layers of tissue and polyester
Regional Application	-	cold region	moderate region	moderate region	Hot region
Thickness	mm	4	4	3.7	3.5
Length	m	10	10	10	10
Width	m	1	1	1	1
Elongation (LN/TR)	%	45/60	40/50	30/30	30/30
Tensile Strength (LN/TR)	kg/5cm	80/65	75/60	55/50	45/35
Tear Strength (LN/TR)	Kgf	25/25	20/20	15/12	15/12
Cold Bending	°C	-25	-10	-5	0
Thermal Stability	°C	+110	+115	+115	+130



An overview of the history of prefabricated waterproofing membrane:

Protecting buildings from moisture has been a human concern throughout history, and bitumen with its exceptional sealing properties has undoubtedly been one of the most important discoveries of antiquity in the last 50 years with the advent of prefabricated waterproofing based on knowledge and technology for safety. Structures against moisture and due to the advantages of prefabricated waterproofing, traditional insulation gradually gave way to them, which was marketed under the brand name Izogum, and therefore among the general public with this name is known.

Types of prefabricated waterproofing membrane based on the type of bitumen:

- 1) Insulations made with polymer bitumen:** The main element of these insulations is 60-70 pure bitumen modified with polymer.
- A) Elastic polymer insulation: In these insulations, SBS polymer (Styrene-Butadiene-Styrene), which is the best known bitumen modifier in the world, is used to modify the properties of bitumen.
- B) Plastic polymer insulation: In these insulations to improve the properties of bitumen, APP polymer (Atactic polypropylene) is used, which is much lower quality compared to elastic polymers.
- 2) Insulations made with blown bitumen:** The main component of these insulators is oxidized bitumen and have lower quality, durability and longevity than polymer insulations and are in a lower category.

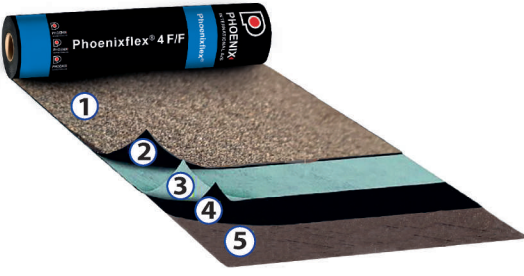
Division of waterproofing based on the reinforcing layer used:

- 1) Single layer insulation:** In these insulations, to strengthen the insulation membrane, non-woven and thick polyester spunbond or thermobond is used, which gives more elegance and strength to the insulation.
- 2) Double-layer insulation:** In these insulations, a layer of thin polyester fibers and a layer of glass fibers are used to strengthen the insulation membrane, which have less strength and durability compared to single-layer insulation and are in a lower category.

Classification of waterproofing based on the final procedure:

- Depending on the application of insulation in different parts of the building, the final procedure can be varied:
- 1) prefabricated waterproofing with aluminum foil surface
 - 2) prefabricated waterproofing with patterned aluminum surface
 - 3) prefabricated waterproofing with polyethylene film surface
 - 4) prefabricated waterproofing with silica powder and mineral aggregation surface

- 1) Top Surface
- 2) Modify Bitumen
- 3) Reinforcement
- 4) Modify Bitumen
- 4) Polyethylene Film





Phoenix® prefabricated waterproofing membrane



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PHOENIX

Introduction

PHOENIX INTERNATIONAL A/S was founded in 1907 in Denmark and has more than 100 years of research and study experience covering arrays of bitumen and polymer-based products. The Company offers a vast range of products to the global market. Phoenix has been actively engaged in many international projects alongside international partners worldwide. One such cooperation is a joint-venture company with Shell South Africa called Bituguard. This joint-venture operates a plant in Bethlehem South Africa which offers advanced bitumen products to the African market. products also include road construction and construction products such as bitumen emulsions, oxidized bitumen and penetration bitumen, types of heat and cold polymer mastic for asphalt and concrete surfaces, interior and exterior acrylic paints, epoxy flooring and various types of waterproofing insulation.



www.phoenixint.dk



Phoenixplast® AL/F BRONZE

Phoenixplast® AL/F (Bronze) prefabricated waterproofing membrane with bitumen modified APP polymer for insulation all types of surfaces.
Service temperatures : 0° C to +130° C
Reinforcement: fiber glass & polyester
Top surface: aluminum foil
Thickness: 3.5 mm



Phoenixplast® F/F SILVER

Phoenixplast® F/F (Silver) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : - 5°C to +115°C
Reinforcement: fiber glass & polyester
Top surface: polyethylene film
Thickness: 3.7 mm



Green Roof Phoenixflex® 4S/F

Green Roof Phoenixflex® 4S/F Prefabricated waterproofing membrane with bitumen modified SBS polymer and has anti-root material which is for roof garden, flower box and green roof covering.
Service temperatures : -25°C to +110°C
Reinforcement: non woven polyester
Top surface: silica powder
Thickness: 4 mm



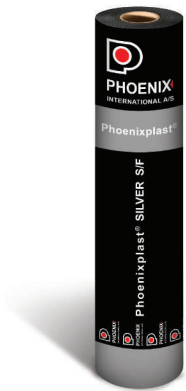
Phoenixflex® 4A/F

Phoenixflex® 4A/F prefabricated waterproofing membrane with bitumen modified SBS polymer for the final layer for insulation of sloping roofs in All regions.
Service temperatures : -25°C to +110°C
Reinforcement: non woven polyester
Top surface: mineral aggregation
Thickness: 4 mm



Phoenixplast® ALP/F BRONZE

Phoenixplast® ALP/F (Bronze) prefabricated waterproofing membrane with bitumen modified APP polymer for insulation all types of surfaces.
Service temperatures : 0° C to +130° C
Reinforcement: fiber glass & polyester
Top surface: patterned aluminum foil
Thickness: 3.5 mm



Phoenixplast® S/F SILVER

Phoenixplast® S/F (Silver) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : - 5°C to +115°C
Reinforcement: fiber glass & polyester
Top surface: silica powder
Thickness: 3.7 mm



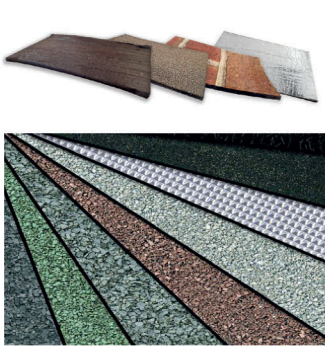
Phoenixplast® F/F GOLD

Phoenixplast® F/F (Gold) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : -10°C to +115°C
Reinforcement: non woven polyester
Top surface: polyethylene film
Thickness: 4 mm



Phoenixflex® 5S/F

Phoenixflex® 5S/F prefabricated waterproofing membrane with bitumen modified SBS polymer can be used as a final layer and underlayment of various surfaces in special projects.
Service temperatures : -25°C to +110°C
Reinforcement: non woven polyester
Top surface: silica powder
Thickness: 5 mm



The final cover	Type
Silica powder	S/F
mineral aggregation	A/F
Polyethylene film	F/F
aluminum foil	AL/F
Patterned aluminum foil	ALP/F



Phoenixplast® AL/F SILVER

Phoenixplast® AL/F (Silver) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : - 5°C to +115°C
Reinforcement: fiber glass & polyester
Top surface: aluminum foil
Thickness: 3.7 mm



Phoenixplast® S/F GOLD

Phoenixplast® S/F (Gold) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : -10°C to +115°C
Reinforcement: non woven polyester
Top surface: silica powder
Thickness: 4 mm



Phoenixflex® 4S/F

Phoenixflex® 4S/F prefabricated waterproofing membrane with bitumen modified SBS polymer with for the bottom and final layer, for roof insulation in All regions.
Service temperatures : -25°C to +110°C
Reinforcement: non woven polyester
Top surface: silica powder
Thickness: 4 mm



Phoenixfluid® WA/2

Phoenixfluid® WA/2 water-based bitumen primer is used to increase the adhesion of Phoenix waterproofing tape on different surfaces and to protect concrete against corrosion (moisture).



Phoenixplast® F/F BRONZE

Phoenixplast® F/F (Bronze) prefabricated waterproofing membrane with bitumen modified APP polymer for insulation all types of surfaces.
Service temperatures : 0° C to +130° C
Reinforcement: fiber glass & polyester
Top surface: polyethylene film
Thickness: 3.5 mm



Phoenixplast® AL/F GOLD

Phoenixplast® AL/F (Gold) prefabricated waterproofing membrane with bitumen modified SBS and APP polymer for insulation all types of surfaces.
Service temperatures : -10°C to +115°C
Reinforcement: non woven polyester
Top surface: aluminum foil
Thickness: 4 mm



Phoenixflex® 4F/F

Phoenixflex® 4F/F prefabricated waterproofing membrane with bitumen modified SBS polymer for insulation of toilets, kitchen floors, foundations, retaining walls and pools.
Service temperatures : -25°C to +110°C
Reinforcement: non woven polyester
Top surface: polyethylene film
Thickness: 4 mm