



ARDEX WPM 444

Shelterbit Phoenix Star (Plain)

4.1mm Reinforced APP Bitumen Membrane

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PRODUCT DESCRIPTION

ARDEX WPM 444 (Shelterbit Phoenix Star) is an APP (Atactic Polypropylene) plastomeric type modified bitumen membrane, consisting of a specially formulated bituminous compound of distilled asphalt modified with selected high grade visco-elastic polymers and reinforced with a combined reinforcement (polyester and fibreglass).

ARDEX WPM 444 (Shelterbit Phoenix Star) is certified in Great Britain with BBA No 99/3586/C and in Italy with Technical Agreement I.T.C. 591/03.

ARDEX WPM 444 (Shelterbit Phoenix Star) is coated with either a sanded or talc top surface finish, while the bottom surface is embossed and protected by a heat sensitive polythene film. This type of finish for the lower surface has been chosen for two specific purposes.

1. To act as a temperature gauge during application. When the film melts it shows that the compound is at the correct temperature.
2. The embossing is to allow the gases to rapidly escape when heated to its correct installation temperature avoiding possible problems of bubbling and blistering.

FEATURES/BENEFITS

APP modified compound

- Excellent cold flexibility to -15°C
- Excellent elongation
- Heat welded laps provides homogenous joint
- Prefabricated membrane
- Good elastic memory

Combined reinforcement carrier

- High mechanical characteristics
- High puncture resistance
- Good elongation
- Will not decay

USES

ARDEX WPM 444 (Shelterbit Phoenix Star) is designed for use as a multi-layer system on concrete or plywood substrates, or as a single layer system on concrete

substrates with a protective topping such as paving slabs or concrete.

- Non-accessible flat roofing
- Accessible flat roofing
- Foundations and underground premises
- Vault covering
- Shed covering
- Renovation and refurbishment
- Inverted roof systems
- Bridges, viaducts and road structures
- Car parks
- Tunnels

INSTALLATION

The application of ARDEX WPM 444 (Shelterbit Phoenix Star) should be carried out by an approved Applicator.

Installation shall be strictly in accordance with the manufacturer's recommendations.

Acceptable substrates to which ARDEX WPM 444 (Shelterbit Phoenix Star) is to be installed must be properly prepared prior to membrane installation.

All surfaces must be dry, clean, smooth, free of sharp edges, loose or foreign materials, oil, grease and other materials which may damage the membrane.

Prior to the application of ARDEX WPM 444 (Shelterbit Phoenix Star) base substrate surfaces should be primed with ARDEX WPM 240 (Shelter Primer). Coverage of primer will depend on the porosity of the substrate.

ARDEX WPM 444 (Shelterbit Phoenix Star) is normally fully bonded to the prepared substrate with side laps of 100mm and end laps of 150mm. Overlaps shall be sealed by torch.

ARDEX WPM 444 (Shelterbit Phoenix Star) may be used in various combinations to produce a variety of specifications tailored to suit the individual waterproofing need.

ARDEX WPM 444 (Shelterbit Phoenix Star) is used as a single layer membrane system which is normally installed prior to the installation of toppings, road base or hot melt asphalt or bitumen.

Application of toppings may be applied on completion. Road base may be installed directly to the membrane without an extra protection layer.

The asphalt should be applied as soon as possible after the ARDEX WPM 444 (Shelterbit Phoenix Star) membrane has been installed. ARDEX recommend applying a minimum 50mm compacted overlay for carpark areas. The topping should be applied in two layers at a temperature of between 120-150°C.

The exact specification will depend on functional and economic requirements. Advice should be sought for suitable specification from ARDEX .

SAFETY PRECAUTIONS

ARDEX WPM 444 (Shelterbit Phoenix Star) is not classified as dangerous goods.

However during installation exercise caution when working with open flame. Examine all surfaces to which the flame has been applied for smouldering or burning conditions.

Do not use open flame on or near highly combustible materials. Follow all local fire codes.

STORAGE

All rolls of ARDEX WPM 444 (Shelterbit Phoenix Star) should be stored in a covered area protected against sunlight and UV radiation. Rolls should be stored in a vertical position on a smooth floor so as not to damage the edges.

PACKAGING

Roll size: 1m x 10m

Roll weight: Approximately 40kg

Rolls per pallet: 23

TECHNICAL DATA

MEMBRANE

Characteristics	Standard	Units	Nom.
Length	UNI EN 1848-1	m	10-1%
Width	UNI EN 1848-1	m	1±1%
Thickness	UNI EN 1849-1	mm	4
Aeric Mass	UNI EN 1849-1	kg/m ²	4.0
Heat Stability	UNI EN 1110	°C	130
Heat Stability After 6 months at 70°C	UNI EN 1110	°C	130
Cold Flexibility	UNI EN 1109	°C	-15
Cold Stability After 6 months at 70°C	UNI EN 1109	°C	0
Dimensional Stability			
Longitudinal	UNI EN 1107-1 A	%	≤ -0.3
Transversal			≤ +0.3
Impermeability	UNI EN 1928	kPa	≥ 60
Tensile Strength			
Longitudinal			
Ultimate Tensile Strength	UNI EN 12311-1	N/50mm	900
Transversal			
Ultimate Tensile Strength			650
Elongation at Break			
Longitudinal	UNI EN 12311-1	%	40
Transversal			45
Tear Resistance			
Longitudinal			170
Transversal	UNI EN 12310-1	N	170
Resistance to Static Load	UNI EN 12730	kg	20
Mineral Adhesion	UNI EN 12039	%	-

Values are referred to a membrane of:
Thickness 4.1mm Weight 4.0kg/m²

All tests have been carried out according to UEATC directive

COMPOUND

Characteristics	Standard	Units	Nom.	Tolerances
Ring and Ball	ASTM D 36	°C	150	Valore min
Penetration at 60°C	ASTM D 5	dmm	120	Valore min
Cold Flexibility	UNI EN 1109	°C	-15	Valore min
Cold Stability After 6 months at 70°C	UNI EN 1109	°C	0	Valore min

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DISCLAIMER

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