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# ARDEX WPM 444

## Shelterbit Phoenix Star (Plain)

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4.1mm Reinforced APP Bitumen Membrane

Excellent cold flexibility to -15°C

Excellent elongation

High mechanical characteristics

High puncture resistance



**BRANZ Appraised**

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# ARDEX WPM 444

## Shelterbit Phoenix Star (Plain)

### 4.1mm Reinforced APP Bitumen Membrane

#### 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 (poly-ester and fibreglass).

ARDEX WPM 444 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 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

- 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 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 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 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.

Apply to all surfaces one coat of ARDEX WPM 240 Bituminous Primer at a coverage rate of 5 square metres per litre and allow to dry thoroughly.

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

ARDEX WPM 444 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 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.

#### STORAGE

All rolls of ARDEX WPM 444 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

#### Pay attention to the following:

Before any substrate preparation, installation or finishing methods relating to ARDEX product are undertaken, please be aware of any potential risks and use appropriate PPE (personal protective equipment). This may involve contacting substrate manufacturers for Safety Data Sheets.

#### SAFETY DATA

Avoid contact with skin and eyes; in case of contact with the eyes, wash out immediately with fresh running water. If irritation continues, seek medical attention. Wear protective gloves, clothing, face and eye protection. This product is combustible. On combustion, may emit toxic fumes of carbon monoxide (CO). When handling the product do not eat, drink or smoke. Avoid inhaling dust/fume/gas/mist/vapours/spray. If fumes or combustion products are inhaled remove from contaminated area. Ensure adequate ventilation during application. Check with your local Council regarding the

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disposal of contents. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. At times updates can occur to data. To ensure you have the most current technical and safety information please consult the latest data sheets found on the product page at [www.ardexaustralia.com](http://www.ardexaustralia.com).

### TECHNICAL DATA

#### MEMBRANE

| Characteristics                          | Standard    | Value                 |
|--|-------------|-----------------------|
| Length                                   | EN 1848-1   | 10 m                  |
| Width                                    | EN 1848-1   | 1.0 m                 |
| Thickness                                | EN 1849-1   | 4 mm                  |
| Aeric Mass                               | EN 1849-1   | 4.0 kg/m <sup>2</sup> |
| Heat Stability                           | EN 1110     | 130°C                 |
| Heat Stability<br>After 6 months at 70°C | EN 1110     | 130°C                 |
| Cold Flexibility                         | EN 1109     | -15°C                 |
| Cold Stability<br>After 6 months at 70°C | EN 1109     | 0°C                   |
| Dimensional Stability                    | EN 1107-1 A |                       |
| Longitudinal                             |             | ≤ -0.3%               |
| Transversal                              |             | ≤ +0.3%               |
| Impermeability                           | EN 1928     | ≥60 kPa               |
| Tensile Strength                         | EN 12311-1  |                       |
| Longitudinal                             |             | 900 (N/50mm)          |
| Transversal                              |             | 650 (N/50mm)          |
| Elongation at Break                      | EN 12311-1  |                       |
| Longitudinal                             |             | 40%                   |
| Transversal                              |             | 45%                   |
| Tear Resistance                          | EN 12310-1  |                       |
| Longitudinal                             |             | 170 (N)               |
| Transversal                              |             | 170 (N)               |
| Resistance to Static Load                | EN 12730    | 20 kg                 |

#### COMPOUND

| Characteristics                          | Standard  | Value   |
|--|-----------|---------|
| Ring and Ball                            | ASTM D 36 | 150°C   |
| Penetration at 60°C                      | ASTM D 5  | 120 dmm |
| Cold Flexibility                         | EN 1109   | -15°C   |
| Cold Stability<br>After 6 months at 70°C | EN 1109   | 0°C     |

#### DISCLAIMER

The technical details, recommendations and other information contained in this datasheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standards. Our instructions and recommendations are only for the uses they are intended. Users are advised to confirm that this product is suitable for their application and conforms with the specifications of the system. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

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This datasheet was issued in January 2021 and is valid for 3 years, in some instances a newer version may be published. Always refer to [www.ardexaustralia.com](http://www.ardexaustralia.com) for the latest technical data from ARDEX Australia Pty Ltd.