

# Bituplus AR 4000

**Polymer modified root inhibiting waterproofing membrane**

## CHARACTERISTICS

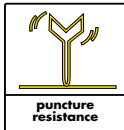
- ▶ Resistant to root perforations.
- ▶ Resistant to fertilizers and pesticides.
- ▶ Resistant to water borne chemicals.
- ▶ Suitable for heavy-duty application.
- ▶ Excellent resistance to puncture.
- ▶ Exceptional dimensional stability under pressure.
- ▶ High tolerance to thermal shock.
- ▶ Impermeable to water and vapor.
- ▶ Chlorine free



waterproofing



Heavy duty



puncture resistance

## DESCRIPTION

Bituplus AR 4000 is a high performance, polymer modified bituminous membrane additivated with a root inhibiting chemical for resisting the attack of roots, fertilizers and insecticides. This membrane is specifically used for waterproofing of structures in contact with earth in presence of vegetation. Bituplus AR 4000 membranes are made from non-woven polyester which are saturated and coated with a homogenous plasto-elastomeric blend of polymers, distilled bitumen and stabilizers. The mixture is carefully produced under controlled conditions to ensure its stability at high temperatures.

## FIELDS OF APPLICATION

- waterproofing of roof gardens, flower containers, underground boxes, and retaining walls.
- waterproofing in soil or growing medium, paving or corner supports, block paving on sand.

## APPLICATION

Application procedure may vary slightly depending upon site conditions. However below given are general guidelines.

### Surface preparation

The surface where the membrane will be laid is to be made clean and dry. All surface imperfections and protrusions are to be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable repair mortar.



### Priming

Apply Polyprime SB @ 4-6 m<sup>2</sup>/L as per ASTM D 41 to a clean smooth and dry surface by brush, roller or spray. Refer primer data sheet for more details. Allow the primer to dry.

### Alignment

Unroll and align Bituplus AR 4000 rolls and re-roll correctly before torching. Overlap should be minimum of 100 mm.

### Torching

Use gas burner to heat substrate and underside of Bituplus AR 4000 Embossing on the lower face of the membrane allows a fast and safe laying. When embossing disappears after torching the membrane is ready to stick. Roll forward and press firmly against the substrate to bond. Caution: Do not over torch as this will expose the reinforcement in the membrane and cause damage to it.

### Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Excess compound should be smoothed and pressed into seam using hot trowel.

### Up stand

All angles and abutments should be sealed with extra care to ensure full bondage. Seal the edges well into the grooves and protect with Polyseal PS or any other mastic sealant.

## STANDARDS

Bituplus AR 4000 membranes conform to the requirements of UEAtc MOAT 31-1984, and tested in accordance with UEAtc MOAT 27-1983, ASTM D 5147.

## EXPOSED APPLICATIONS

Use Mineral membranes for exposed type applications, flashing details on up-stands and parapets. This type of self-protected membrane is produced with a layer of natural slate flakes embedded on the upper surface. The layer of slate and the positioning of the fiberglass, at below it, provide enhanced protection from UV and retards ageing.

## STORAGE

Bituplus AR 4000 should be stored in a clean and covered area. Rolls should not be stacked.

## SAFETY PRECAUTION

Any naked flame should be kept away from the gas cylinders. When ignited the torch should be watched at all times. The torch should not be on the finished roofing. Extreme care should be taken when working near combustible materials or items, which might be scorched by the gas flame.

## DISPOSAL

Bituplus AR 4000 is non-hazardous, nonflammable and therefore can be disposed into any regular disposal area. However, it should be disposed only after wrapping with paper, plastic or cloth as the modified bitumen has a tendency to soften under heat and pressure which would make further handling very tough.

## HEALTH & SAFETY

Bituplus AR 4000 contains a tacky bitumen compound which, while applied can stick to human skin. Such stains can be removed by using a cloth dipped in a light solvent. In case the affected area is a sensitive area it is advised medical attention should be given.

## TECHNICAL DATA

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4	DIN EN 1849 -1
Roll length, [m]	10	-
Roll width, [m]	1	-
Unit weight, [kg/m <sup>2</sup> ]	4.0-4.3	DIN EN 1849 -1
Reinforcement (polyester), [g/m <sup>2</sup> ]	180	EN 29073 - 1
Coating asphalt	Polymer Modified Asphalt with root inhibiting chemical	-
Softening point, [°C]	> 140	ASTM D 36
Penetration, [dmm]	15-25	ASTM D 5
Tensile strength (L/T), [N/5cm]	750/600	DIN EN 12311 - 1
Elongation @ break (L/T), [%]	40/50	DIN EN 12311 - 1
Puncture resistance	Static:L <sub>25</sub>	DIN EN 12730
Heat resistance @ 120°C	No Flow	DIN EN 52 123
Tear resistance [L/T], [N]	180/200	DIN EN 12310 - 1
Hydrostatic pressure @ 5 bar [50m]	No leakage	BS EN 12390 (part 8)

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

