DULAS HP
(SBS-MODIFIED MEMBRANE)

DESCRIPTION

DULAS HP ANTI ROOT is an excellent anti root, SBS-modified bitumen waterproofing sheet membrane with a special compound to prevent the root penetration. It is absolutely root proof and widely used in green roof systems. The topside is covered with a special foil or sand or slate and the bottom layer with a polymeric foil.

FEATURES AND BENEFITS

- Excellent anti-root property
- Self-sealing to minor cracks
- It can be used for interior garden system or exterior green roofs
- Highly resistant to dilute acid and fertilizers
- High resistance to ageing
- High elasticity and flexibility
- High tear resistance

SPECIFICATION AND COMPLIANCE

DULAS HP ANTI ROOT membranes are tested in accordance with UEAtc (European Union for Technical Agreement for Construction Industry) and can be tested as per ASTM D5147 (Standard Test Method), ASTM D6164 (Standard Specification) and other relevant international standards

MAIN USES

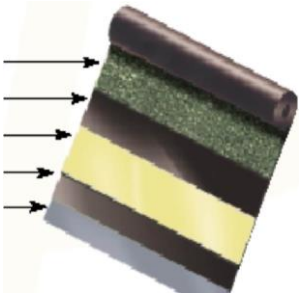
DULAS HP ANTI ROOT is used as:

- Root-proof layer
- It can be used as a single layer or part of Duproof two-layer anti-root sealing system that is used for waterproofing and root proofing of green roof system
- The membrane is used for interior garden system as well as for exterior roof garden systems as protection against root penetration

QUALITY ASSURANCE AND WARRANTY

Duproof is an ISO 9001 Quality Assured company and DULAS HP ANTI ROOT membranes carry a material warranty against any manufacturing defects.

Foil or sand or slate
Special Anti-Root SBS Modified Bitumen
Spun Bond Polyester Reinforcement
Special Anti-Root SBS Modified Bitumen
Polyethylene foil



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METHOD OF APPLICATION

The application of **DULAS HP ANTI ROOT** roofing and waterproofing membranes are easy and fast by the torch–on method. Clean the surface to be waterproofed and prime with **DUPRIME** and allow to dry. The drying time depends on the porosity of the substrate and the environmental conditions (approx. 0.5 - 3 hrs.)

The membranes are then unrolled and aligned properly on the entire primed substrate, allowing overlap joints of 100 mm at the sides and 150 mm at the end. Roll back the membranes without disturbing the alignment. Apply gas torch on to the contact area of the membrane and the substrate. Ensure enough melting at the bottom to form sufficient melt adhesive to stick on to the substrate. While torching, forward the roll and press firmly to bond the membrane on to the substrate. Then, smoothen out seams by means of a rounded trowel. This system of application can be used on concrete, concrete blocks, bricks, foam concrete, fibre cement board and steel substrates. Care must be taken when torch bonding with heat sensitive substrates.

DULAS HP ANTI ROOT is versatile and flexible that can be applied using pour and roll application method and cold bond applied method. For technical instruction refer to Duproof Application System.

PACKING AND STORAGE

DULAS HP ANTI ROOT membranes are supplied in rolls of 1m X 10m; shrink wrapped on pallets. Rolls must be kept upright on pallets under shade. **DULAS HP ANTI ROOT** pallets should not be stacked one over the other. The rolls have to be stored vertically and protected against moisture and extreme heat. Prior to application in cold season, store at least 12 hours free from frost.

HEALTH AND SAFETY

There are no direct health hazards associated with **DULAS HP ANTI ROOT** membranes. Normal precautions for hot and volatile substances should be observed during application. Refer to our MSDS sheets for advice.

TYPE AND FINISH

Thickness	(mm)	3.0	4.0	5.0
Nominal weight	Kg / m^2	3.5	4.5	5.5
Dimensions (length x width)	[m]	10 x 1		
Coating	-----	SBS — modified bitumen		
Type of carrier	-----	180/200/250 g/m^2 polyester mat (P)		
Top Surface	-----	Polymeric foil(F) or Sand(Q) or Slate(S) or(QQ) for both side sand surface		
Bottom Surface (Torching side)	-----	Printed Polyethylene foil		

To order specify finish, reinforcement and thickness e.g. DULAS HP ANTI ROOT 200 4mm for foil finish, 200g/m^2 polyester reinforcement and 4 mm thick sheet membrane.

TECHNICAL DATA

PROPERTY	UNIT	TEST METHOD	VALUE		
COMPOUND PROPERTIES					
Softening point	[° C]	ASTM D 36	120		
Penetration, @ 25°C	dmm	ASTM D 5	25-35		
Heat resistance, 2 hrs. @100°C	-----	UEAtc	No flow		
Flexibility at low temperature	[^{0} C]	DIN 52123	-15 to -20		
Water absorption	%	ASTM 570	<0.4		
MECHANICAL PROPERTIES	-----				
Type of carrier	g/m^2		Spun-bond Polyester Mat		
			180	200	250
Tensile strength (L/T)	[N / 5 cm]	UEAtc	750 / 650	900 / 700	1050/850
Elongation (L/T)	[%]	UEAtc	40/45	45/50	50/55
Tear resistance (L/T)	N	UEAtc	220/235	230/245	250/265
Puncture resistance Static Dynamic	-----	UEAtc	L_4 Static @ 25 Kg I_4 Dynamic @ 9 Joules		

In accordance with the standard up to 20% variation is expected

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