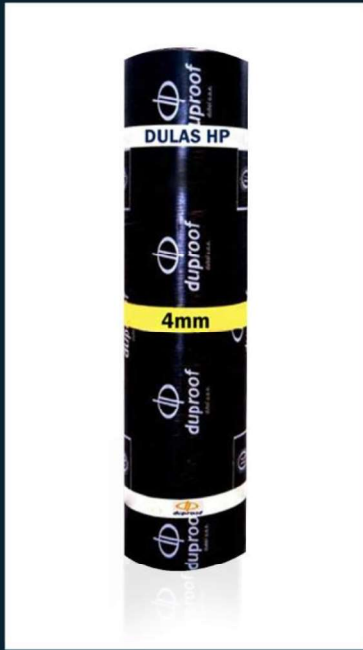




# DULAS HP

(SBS-MODIFIED MEMBRANE)



## DESCRIPTION

**DULAS HP** is a high quality PREMIUM GRADE polymer-rich SBS modified bituminous torch-on membrane with a reinforcement core of spun-bond non-woven polyester mat, used for the most demanding applications of tanking and waterproofing of substructure areas in buildings and civil engineering projects. It is used where a malleable composition is preferred.

The **DULAS HP** range belongs to the Elastoproof group of membranes produced using a special grade of bitumen modified with virgin SBS polymer. The polymer-rich mixture is used to saturate and coat both sides of the polyester mat to the required thickness of the membranes.

## FEATURES AND BENEFITS

- High mechanical properties: good movement accommodation; resistant to tear and puncture
- High resistance to hydraulic pressure: provides an impermeable and low absorption layer
- Wide temperature tolerance: stable in tropical climates; resistant to thermal ageing and shock
- High chemical resistance: withstands effects of salts and other corrosive agents in soil and water
- Versatile: available with a range of reinforcements, thickness and surface finishes for use in variety of applications

## SPECIFICATION AND COMPLIANCE

**DULAS HP** 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** membranes are used where a flexible, high performance waterproofing system is needed, such as:

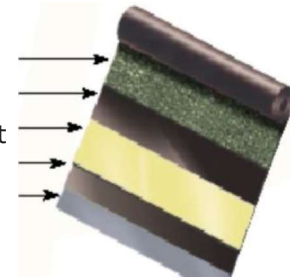
- Substructure waterproofing of deep foundations subject to high and/or fluctuating water tables
- External surfaces of underground water reservoirs, pools and other liquid retaining structures
- Floors of plaza decks, multilevel commercial and industrial complexes, buildings, wet rooms, etc
- Flat and pitched roofs, balconies, terraces, etc
- Re-roofing works to the existing structures

## QUALITY ASSURANCE AND WARRANTY

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



Foil or sand or slate  
 SBS Modified Bitumen  
 Spun Bond Polyester Reinforcement  
 SBS Modified Bitumen  
 Polyethylene foil



# DULAS HP (SBS-MODIFIED MEMBRANE)

ISS 1/4/17, REV 0

## METHOD OF APPLICATION

Surfaces onto which the membrane is to be applied must be sound, clean and dry. Dust, loose material and protrusions must be removed and cracks, holes etc made good.

**Priming:** Apply one coat of **DUPRIME** solvent based bituminous primer to all surfaces at 5-6 m<sup>2</sup>/lit and allow to dry. Primed surfaces must be covered within the same day. If left exposed for longer periods, clean and re-prime before applying the membrane.

**Membrane Application:** Position the rolls carefully with the correct orientation before the torching operation begin. Heat the lower surface of the rolls with a propane gas torch and unroll as the bitumen begins to melt. Maintain minimum 100 mm side laps and 150 mm end laps between rolls, staggering the joints where possible. All seams must be heat sealed from the top to ensure watertight laps.

**Protection:** For relevant areas like Substructure waterproofing or Tanking etc, once laid, it is recommended to protect the membrane from long-term exposure, construction abuse and backfill, preferably within 24 hours. On vertical areas **DUBOARD** are recommended; on horizontal surfaces a minimum 25 mm thick sand-cement screed may be used.

**DULAS HP** membranes are also suitable for partially bonded or loose laid installation. Contact the technical department of your local distributor for advice.

## PACKING AND STORAGE

**DULAS HP** membranes are supplied in rolls of 1m x 10m and shrink wrapped on pallets. Rolls must be kept upright on pallets under shade. **DULAS HP** pallets should not be stacked over each other.

## HEALTH AND SAFETY

There are no direct health hazards associated with **DULAS HP** 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 <sup>2</sup>	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 <sup>2</sup> 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 FHP 200 4mm for foil finish, 200 g/m<sup>2</sup> polyester reinforcement and 4 mm thick sheet membrane.

## TECHNICAL DATA

PROPERTY	UNIT	TEST METHOD	VALUE		
<b>COMPOUND PROPERTIES</b>					
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	[° C]	DIN 52123	-15 to -20		
Water absorption	%	ASTM 570	<0.4		
<b>MECHANICAL PROPERTIES</b>					
Type of carrier	g/m <sup>2</sup>		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 <sub>4</sub> Static @ 25 Kg I <sub>4</sub> Dynamic @ 9 Joules		

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

Tolerances on nominal values shown are as per UEAtc directives for polymer modified bitumen membranes. These data are correct at the time of printing but may be changed without any prior notice subject to clients requirements availability of raw materials or other conditions. This data sheet supersedes all previous publications pertaining to this product. All reasonable care has been taken in preparing this document, which to the best of our knowledge is accurate and true. Recommendations and suggestions are made in good faith and should only be considered for general guidance. No liability is assumed or taken by us in relation to the application, as usage conditions and any labour involved are beyond our control.