

DWI

DERMABIT®
WATERPROOFING IND.

ELASPHALT 4170

Also available as 3170, 5170 - An SBS modified bituminous membrane



GENERAL DESCRIPTION

ELASPHALT 4170 (3170, 5170) is a high performance elastomeric roofing and waterproofing membrane, reinforced with a core of non woven polyester of 180g/m² nominal weight. It combines the ability to withstand high ambient temperatures with the usual characteristics of an SBS membrane. It is suitable for a variety of applications among them; roofs, terraces, foundations, basements, pile capping, footing, tanking, car parks, abutments, tank lining, swimming pools, airport aprons, ramp areas and others.

SPECIAL FEATURES

- Positive barrier to water and dampness.
- Excellent resistance to ageing and atmospheric agents.
- Highly flexible during application at sub-zero temperatures without physical strains.
- Maintains shape stability at high temperatures.
- Accommodates structural movements.
- Withstands thermal choc.
- It is provided with a lap line in slated and Aluminium membranes and as an option on PBS or Sand.
- Depending on client request and specification it may come in various grades: -10degC, -15degC, -20degC, -25degC or according to ASTM D6164. Manufactured according to EN13707.
- The top surface can be either: a thin Poly-ethylene film (PBS, fine sand (Sand), natural grey or pigmented slates, Aluminium or with geotextile. The bottom surface is covered with a thin easy torched Poly-Ethylene film (a sand bottom is also available on request).
- Resistant to chemical attack from soil or water. It is suitable for areas subject to seaside salinity.

COATING MIXTURE OF THE MEMBRANE

The waterproofing capability is provided by the coating mix of the **ELASPHALT** membrane. The reinforcement made of nominal 180g/m² non-woven polyester mat is impregnated with this mix and then coated to factory regulated thickness. The mix is made up of bitumen, heavily modified with SBS rubber, thermoplastic resins and stabilizers giving the membrane its excellent resistance to atmospheric agents and ageing, maintaining shape stability at high temperatures and malleability at low temperatures, improving adhesion strength and making the membrane easy to apply saving on time and labor.

PACKING

ELASPHALT 4170 (3170, 5170) is manufactured in a standard size of 1x10m, however special length can be done on request. All rolls are sold on pallets and covered with a shrink-wrap.

TOOLS & EQUIPMENT

The application of the **ELASPHALT** membrane requires very limited tools like propane gas torches and cylinder, a knife for cutting the membranes to size and a trowel with rounded end. Various torch heads are sold separately by **DWI** on request.

METHOD OF APPLICATION

The application of **ELASPHALT 4170 (3170, 5170)** is both easy and quick. For applications on concrete, tiles or any other porous surface, coat the substrate with **DERMAPRIMER** (solvent based bituminous primer according to **ASTM D41**) at the rate of 4-5m²/litre. Allow this coating to dry thoroughly. In time of high humidity we recommend it should be left overnight.

The **ELASPHALT 4170 (3170, 5170)** should first be unrolled and positioned correctly. Each roll should overlap the adjacent roll by 10cm. Once the roll has been positioned correctly, the membrane should be rolled up again, taking care not to change its orientation. Using left to right movements, heat the lower surface of the membrane with a propane gas torch. This will cause slight surface melting and the molten bitumen will adhere to the surface. You then torch on the side overlap to the recommended size of 100mm. Continue the above method for consecutive rolls remembering end-laps must be minimum 150mm. Inspection of lap joints must be carried out to ensure total adhesion.

TECHNICAL DATA

DWI products are tested at random intervals by independent laboratories to international standards and the results of these tests are available on request. In addition, each batch manufactured is subject to strict quality control procedures to ensure it meets appropriate and applicable standards and/or norms.

		PROCEDURE	UNITS	TOLERANCE	VALUE
ASTM					
Length			m	<-1%	10
Width			m	<-1%	1
Thickness		ASTM D5147	mm	-0.2mm	4.00
Tensile properties: max. tensile force	- long	ASTM D5147	N/50mm	-20%	850
	- trans	ASTM D5147	N/50mm	-20%	700
Tensile properties: elongation	- long	ASTM D5147	%	-15	50
	- trans	ASTM D5147	%	-15	55
Resistance to tearing	- long	ASTM D5147	N	min	550
	- trans	ASTM D5147	N	min	355
Lap joint strength	- long	ASTM D5147	N/50mm	-20%	850
	- trans	ASTM D5147	N/50mm	-20%	700
Low temperature flexibility*			C	min	-5
Dimensional stability at +80C	- long	ASTM D5147	%	mlv	-0.5
	- trans	ASTM D5147	%	mlv	-0.5
Water Absorption (n/a slate)		ASTM D5147	%	mlv	<0.15
CE					
Visible defects		EN 1850-1	N/m ²	0	0
Length		EN 1848-1	m	<-1%	10
Width		EN 1848-1	m	<-1%	1
Straightness		EN 1848-1	mm	<20mm	pass
Mass per unit area		EN 1849-1	kg/m ²	+/- 10%	4.70
Thickness		EN 1849-1	mm	-0.2mm	4.00
Watertightness to liquid Water		EN 1928-1	mlv	>60kPa	pass
Tensile properties: max. tensile force	- long	EN 12311-1	N/5cm	-20%	850
	- trans	EN 12311-1	N/5cm	-20%	700
Tensile properties: elongation	- long	EN 12311-1	%	-15	50
	- trans	EN 12311-1	%	-15	55
Resistance to tearing (nail shank)	- long	EN 12310-1	N	min	270
	- trans	EN 12310-1	N	min	270
Shear resistance of joint	- long	EN 12317-1	N/5cm	-20%	850
	- trans	EN 12317-1	N/5cm	-20%	700
Resistance to static loading (method A)		EN 12730	kg	min	20
Resistance to impact		EN 12691	mm	mlv	>700
Flexibility at low temperature*		EN 1109	C	min	-5
Dimensional Stability	- long	EN1107-1	%	max	-0.5
Flow Resistance less than 2mm		EN1110	C	mlv	100
Reaction to fire		EN 13501-1		Euroclass	F

* Different cold flexibility values can be supplied to special order.



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