



BITUMODE FLEX



SBS MODIFIED BITUMEN ELASTOMERIC WATERPROOFING MEMBRANE REINFORCED WITH NON-WOVEN POLYESTER

Bitumode Flex are high performance torch applied SBS modified bitumen waterproofing membranes designed to provide roof & sub-structure concrete surface with perfect waterproofing protections.

Bitumode Flex is a modified by SBS (styrene butadiene styrene), thus guaranteeing superior performance under various conditions.

Bitumode Flex is reinforced with non-woven polyester which provides high mechanical properties and dimensional stability.

Uses

Bitumode Flex is a high-performance membrane, which can be applied virtually anywhere where torch applied modified bitumen membranes subject to high mechanical stresses are specified and where high flexibility is required.

Bitumode Flex can be applied in:

- Single layer roofing system subject to low temperature
- Foundations and underground structures subject to movements
- Waterproofing of toilets, wet area inside buildings
- Bridge decks
- Underground structures

Bitumode Flex with mineral slated finish is recommended for exposed roofing system (unprotected) for non-accessible roofs or roofs subject to low traffic conditions.

Quality Control

Bitumode Qatar Waterproofing Factory is ISO 9001:2015, ISO 45001:2018 and ISO 14001:2015 Certified. it applies a stringent quality control system utilizing its in-house laboratory. Occasional samples are analyzed by independent laboratories to ensure continued adherence to the highest standards (ASTM D 6164, Type-1 and Type -2, EN etc.)

Product Range

Standard thickness available include 3mm, 4mm & 5mm.

Upper surface finish choices include:

- Polyethylene Film (PE).
- Mineral Slated Grey (GY).

The nominal length of each roll is 10 meters, and the nominal width is one meter. Special specifications can be designed based on client's needs.

Advantages

Bitumode Flex has been designed with special regard to providing clients with an excellent and versatile product.

Advantages of **Bitumode Flex** include:

- Easy to apply (by torch).
- Highly mechanical properties.
- Absolute impermeability to water.
- High elasticity at severe temperature as low as -20°C.
- Resistant to chemicals attack probable to be existing in soil.
- Excellent high temperature performance.
- Excellent adhesion on any surface.
- High dimensional stability.
- Environmentally friendly.
- Resistant to soil chemicals and salts up to certain limits.



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TECHNICAL DATA		UNIT	RESULT			TOLER.	TEST METHOD	الخواص الفنية	
Product		Roll	P-180	P -200	P -250				
Roll Length		m	10			1%	EN 1848-1	الطول	
Roll Width		m	1			1%	EN 1848-1	العرض	
Thickness		mm	3, 4 & 5			(± 5 %)	EN 1849-1	السّمك لتشطيب السطح بولى ايثيلين	
Cold Flexibility		°C	-10				EN 1109	المرونة عند درجات الحرارة المنخفضة	
Heat Resistance		°C	100				EN 1110	الثبات عند درجات الحرارة العالية	
Water impermeability at 100 Kpa		-	Absolutely impermeable				EN 1928:2000	مقاومة نفاذية الماء عند 100 كيلو بسكال	
Reinforcement		g/m²	NON-WOVEN POLYESTER					التسليح	
			180	200	250				
Tensile Strength	Long	N/5cm	800	900	1100	-20%	EN 12311-1 & 2	طوليّاً	مقاومة الشد القصوى
	Wide	N/5cm	650	700	850	-20%		عرضيّاً	
Elongation at break	Long	%	50	50	50	-15	EN 12311-1 & 2	طوليّاً	الاستطالة القصوى
	Wide	%	50	50	50	-15		عرضيّاً	
Tear Resistance	Long	N	550	650	750	-10%	ASTM D-5147	طوليّاً	مقاومة التمزق طبقاً للمواصفات الأمريكية
	Wide	N	450	550	600	-10%		عرضيّاً	
Joint Tensile Strength	Long	N	800	900	1100	-20%	EN 12317-1	طوليّاً	مقاومة الشد عند اماكن الركوب
	Wide	N	650	700	850	-20%		عرضيّاً	
Dimensional stability	Long	%	± 0.5	± 0.3	± 0.2		EN 1107-1	طوليّاً	ثبات الأبعاد
	Wide	%	± 0.5	± 0.3	± 0.2			عرضيّاً	
Resistance to Impact		mm	700	800	900	-15%	EN 12691	مقاومة الاختراق الديناميكي	

NOTES:

- ❖ Above results are based on 4 mm membrane.
- ❖ Products are available in 3, 4 and 5 mm for PE finish and 3,4 mm for slated finish.
- ❖ Due to constant product improvements, BITUMODE QATAR WATERPROOFING FACTORY reserves the right to change above values without prior notice.

STORAGE:

- ❖ BITUMODE membranes should be stored vertically in well closed and ventilated places not subject to direct sunlight.
- ❖ Bitumode Membrane has a shelf life of 12 months from the date of production.

APPLICATION INSTRUCTIONS:

- ❖ BITUMODE membranes are installed by propane torch welding method, loose laid or fully bonded to the substrate depending on system requirements.
- ❖ While unloading from truck the rolls shall by no means allowed to fall or be thrown down from the truck.
- ❖ To avoid applying the membrane to corners with 90 °C angle, sand cement can't strip 5x5 cm should be executed at horizontal - vertical intersections.
- ❖ Surface to be waterproofed should be clean, dry, free from dust and smooth, in case of irregular surface a sand cement screed is recommended.
- ❖ Before laying BITUMODE membranes, surface should be primed with cold applied bituminous primer (BITUMODE Primer SB).
- ❖ The membrane is unrolled and placed in aligned position.
- ❖ Each roll should overlap the next by 10cm side laps and 15cm staggered end laps.
- ❖ Then, membrane should be re-rolled about half of its length without changing its orientation.
- ❖ Using a propane gas torch, the membrane is un-rolled again slowly while applying the flame to the entire exposed lower face (For fully bonded system) - until the plastic cover film burns off and the bituminous mass starts melting, thus creating a heat weld between the membrane and the substrate.
- ❖ Then, torching of the seams takes place by heating the contact line at side and end laps by torch from above, pressing the upper membrane on to the lower one using a trowel, the torch has to be carefully used avoiding to keep the flame on the same point for too long.
- ❖ For sloping roofs start laying the membrane from the lower edge with longitudinal direction of rolls perpendicular to slope direction, side lap of next roll to be placed above the first one, etc....

- ❖ **Once the membrane has been applied to a horizontal and vertical wall, the membrane must be protected by a maximum of 24 hours' time to avoid any future mechanical damage.**
- ❖ **Kindly note that once we delivered the material you need to put our products in the shaded area which is properly ventilated area to avoid any mechanical damage,**
- ❖ **After successful installation, it is crucial to ensure that the bituminous membrane remains protected and not exposed or uncovered for a period exceeding seven days." If the bituminous membrane remains uncovered for an extended period, several consequences may arise:**

1. **UV Degradation:** Exposure to sunlight can cause the bituminous membrane to degrade due to ultraviolet (UV) radiation. This can lead to a reduction in its flexibility, cracking, and loss of waterproofing properties.
2. **Weather Damage:** Unprotected from the elements, the membrane is susceptible to damage from rain, wind, and other weather conditions. This can result in water seepage and structural issues.
3. **Contamination and Debris:** Leaving the membrane uncovered can attract dust, dirt, and debris, which might hinder its effectiveness and impair adhesion during subsequent construction stages.
4. **Premature Aging:** The prolonged exposure to environmental factors can accelerate the aging process of the membrane, leading to premature failure and shortened service life.
5. **Voided Warranty:** Manufacturers often specify guidelines for proper installation and care. If the membrane remains uncovered beyond the recommended time frame, the warranty may become void,

For further details, please contact Bitumode technical department.