SINCE 1934

TECHNO bit

TECHNOLOGY OF INSULATING MATERIALS

CARAPACE

SELF PROTECTED MEMBRANE



APP MODIFIED WATERPROOFING MEMBRANE WITH NON-WOVEN RENIFORCED POLYESTER

20 YEARS GUARANTEE

THE WISE CHOICE

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MADE IN EGYPT

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Description

CARAPACE PET is a plastomeric waterproofing membrane manufactured in an advanced continuous calendaring process by saturating and coating a synthetic carrier a waterproofing compound made of special grade of bitumen, modified with APP polymers.
While the modifiers enhance the thermal, mechanical, and aging properties of membrane compound mechanical characteristics.
CARAPACE is produced using the non-woven continuous filament spun-bond Polyester carrier properties.
CARAPACE is top layered with special Anti-Puncture film which gives the membrane its extra ordinary mechanical characteristics.

Major Features

- Anti-Puncture - High Tear Rsistance.
- Improved chemical resistance to acidic and alkaline solutions.
- Absolute impermeability to water.

Uses

CARAPACE membranes are used in general purposes as general purpose waterproofing membranes in applications subject to moderate mechanical stresses in single or multi-layer systems for a variety of waterproofing requirements. **CARAPACE** membranes are particularly recommended for the following Areas of Applications :

- Below grade Waterproofing & Damp Proofing.
- Protection Layer in multi layer systems.

DESTINATIONS OF USE ACCORDING TO MARK STANDARDS — CE MARK STANDARDS

CARAPACE SELF PROTECTED MEMBRANE	ROOF WATERPROOFING EN 13707						FOUNDATIONS OR GROUND WATERPROOFING EN 13969	UNDER SLATES OR TILES EN 13859-1	VAPOUR CONTROL EN 13970	WATERPROOFING OF CONCRETE BRIDGE DECKS & OTHER TRAFFICKED AREA EN 14695		
	EXPOSED			BALLASTED		ANTI-ROOT ROOF GARDEN				SINGLE-LAYER		SINGLE OR DOUBLE LAYER UNDER PAVING ASPHALT
	SINGLE LAYER	MULTI-LAYER		SINGLE LAYER	MULTI LAYER					ROAD DECKS	CAR PARK ROOFS	
		TOP LAYER	UNDERLAY OR INTERMEDIATE LAYER									
CARAPACE 4 mm			▲	▲	▲		▲			▲	▲	▲
CARAPACE 5 mm			▲	▲	▲		▲			▲	▲	▲
CARAPACE 6 mm			▲	▲	▲		▲			▲	▲	▲

Surface Finish

The lower surface of **CARAPACE** is laminated with a thin Polyolefinic film (Sacrifice Layer) while the upper surface is covered with **Cross Laminated HDPE film.**

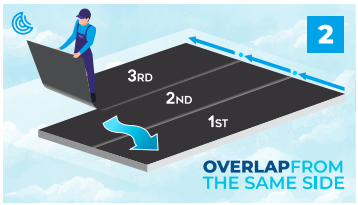
Cross-laminated HDPE Film



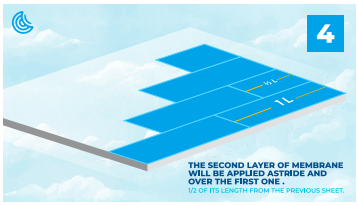
Method of Application

CARAPACE membranes are applied by using a propane torch or by mechanical fastening.
The substrate surface must be clean, dry, smooth, and free of any irregularities. According to the surface conditions, a coat of water base primers may be required, prior to the applications of the membranes. **CARAPACE** can be applied to the substrate fully bonded, semi bonded or loose lay, and the method of adhesion to the substrate shall be decided according to the waterproofing system design. Side laps should be from 12 – 15 cm. For more information on application refer to the **TECHNOBIT** Application Guide.









Versions

4mm | 5mm | 6mm

Storage & Handling

CARAPACE rolls should be kept in an upright position in a flat, properly ventilated and sheltered storage area.

CARAPACE

APP modified waterproofing membrane
with non-Woven Reniforced Polyester

كارابيس

شرائح عازلة من البتومين المعدل بال **APP**
مسلحة بألياف البولي إستر غير المنسوج

Properties الخصائص		Test الإختبار	Unit وحدة القياس	Test Method طريقة الإختبار	Tolerance السماحية	Typical Values القيم النموذجية
Dimensional Properties خصائص الأبعاد		Thickness السمك	mm	EN-1849-1	±5%	5
		Width العرض	m	EN-1848-1	±1%	1
		Length الطول	m	EN-1848-1	±1%	8
		Straightness درجة إستواء السطح (الإستقامة)	mm	EN-1848-1	±1%	20
Membrane Properties خصائص الغشاء	Mechanical Properties الخصائص الميكانيكية	Tensile Strength (MAX) مقاومة الشد القصوى				
		Longitudinal طوليا"	N/5cm	EN-12311-1	±20%	900
		Transverse عرضيا"	N/5cm	EN-12311-1	±20%	700
		Elongation @ Break أقصى معدل للإستطالة				
		Longitudinal طوليا"	%	EN-12311-1	40%	40
		Transverse عرضيا"	%	EN-12311-1	35%	45
		Tearing Strength (Nail-Shank) مقاومة التمزق				
		Longitudinal طوليا"	N	EN-12310-1	±30%	350
		Transverse عرضيا"	N	EN-12310-1	±30%	400
		Resistance to static loading مقاومة الإختراق الإستاتيكي	KG	EN 12730 Method A	≥	25
		Resistance to Impact loading مقاومة الإختراق الديناميكي	mm	EN 12691 Method B	≥	1000
	Thermal Properties الخصائص الحرارية	Flow resistance @ ElevatedTemperature الثبات عند درجات الحرارة العالية	°C	ASTM D-5147, EN-1110	10%	110
		Cold Temperature Flexibility المرونة عند درجات الحرارة المنخفضة	°C	ASTM D-5147, EN-1109	≥	-20
		Dimensional Stability ثبات الأبعاد				
		Longitudinal طوليا"	%	EN-1107-1	≤	± 0.4
		Transverse عرضيا"	%	EN-1107-1	≤	± 0.4
	Miscellaneous Properties خصائص أخرى	Water Tightness مقاومة نفاذية الماء	Kpa	EN-1928:2000	≥	500
		Water Absorption درجة امتصاص الماء	%	ASTM D-5147,UNI 8202/22	5%	1.5
		Vapour Permeability نفاذية بخار الماء	μ	UNI 8202/23 , EN1931	-	20000
		Joints Tensile Strength مقاومة الشد عند مناطق التراكب				
		Longitudinal طوليا"	N/5cm	EN 12317	20%	800
		Transverse عرضيا"	N/5cm	EN 12317	20%	600
		Durability : Flow resistance at elevated temperature after artificial ageing	°C	EN 1296, EN 1110	10%	90
		Durability : Watertightness after artificial ageing	Kpa	EN 1296, EN1928 (B)	-	Pass
		Durability : Watertightness against chemicals	Kpa	EN 1847, EN 1928 (B)	-	Pass
		Bond strength at 23°C	N/mm²	EN 13596	≥	0.4
		Shear strength at 23°C	N/mm²	EN 13653	≥	0.15
		Compatibility after heat conditioning at 23°C	%	EN 14691	≥	80
		Resistance to compaction of the protective asphalt layer	-	EN 1847, EN 1928 (B)	-	Pass
		Resistance to dynamic water pressure without damage by pre-treatment	-	EN 1847, EN 1928 (B)	-	Pass
		Dimensional stability at high temperature	%	EN 1107-1, EN14695 Annex B	≤	± 1
		Fire Classification - Extemal Fire Performance تصنيف الحريق - أداء الحريق الخارجي	Class	EN 13501-5	-	F
		Reaction to fire التعامل مع الحريق	Class	EN 13501-1	-	F

The information given in this **Technical Data Sheet** reflects typical median properties based on laboratory tests, and practical experience; subject to the tolerance levels of **UEAtc** directive. However, as the product is often used under conditions beyond our control, we can't warrant but the product itself.

- **± 10%** variance in the values is accepted.
- Tolerance for Tear properties is **± 30%.**
- Tolerances for the above values if not mentioned are according to the UEAtc directives.
- Exact value depends on thickness of the product.
- Product Technical specifications may be updated by **TechnoBit** without prior notice.
- Issue Date of This Technical Data Sheet is **MARCH / 2026**
- The Information Provided by This Issue Cancels Any Previous Issues.

ISO 9001 OHSAS 18001 ISO 14001