ROCKAL

AL ALAMIA FOR INSULATION الشركة العالمية للعزل

www.rockal.org

Waterproofing Materials

ABOUT ROCKAL

ROCKAL Is a leading Egyptian producer of building insulation materials.
ROCKAL offers reliable and effective insulation products for construction companies, contractors in Egypt, Gulf & Europe.
ROCKAL was founded in 2003 and since then has accumulated considerable experience in manufacturing, import and export the insulation building materials and considered as the leader producer and supplier for insulation building materials.

As well as developing and promoting materials and systems that minimize energy-loss in the industrial sector and public utilities.
With experience of more than 20 years in the insulation business by our founders and 15 years of experience as manufacturers and distributors of different insulation materials we have good overview of the market needs and requirments which by years of experience ,we managed to deliver with maximum efficiency.

ROCKAL is proud to offer up-to-date state of the art manufacturing technologies that support the construction revolution and mega projects all over the world and reflect on price as well.
ROCKAL provides Wide range of insulation materials and reliable solutions that facilitate making a choice that is best for the project in both in price and in quality.
ROCKAL materials are used in the construction of houses, plants, HVAC systems, infrastructure and many applications.
We are proud of ROCKAL products.
Our high-quality insulation materials are produced from plain raw components taking into consideration the environmental impact and practice the latest sustainability measures while producing our products.
We care about our environment, energy efficiency of buildings & cutting down operational and construction costs as well as our consumption of energy in ROCKAL plants.
We enjoy seeing our production accredited and Complying with European, American and International standards, and introducing ROCKAL as a global brand.

ROCKAL PRODUCTION

the new 40,000 m² facility will be dedicated to the production of modified bitumen membranes, ROCKAL is planning to invest in new production lines to increase cost efficiency and enhance competitiveness in both local and foreign markets, and making it the most innovative plant in middle east.
Improving customer service is also one of our priority principles.
Leadership of ROCKAL insulation is focused on the Egyptian and foreign markets to achieve not only the best quality of products we produce, but also high level of technical support.
All products developed and supplied by ROCKAL meet environmental standards and are safe for humans and the environment.

We are always researching and innovating in our industry to recycle and recycle as much materials and waste as possible.
Our production lines and equipment give us the ability to supply insulation materials for large construction projects and to develop unique products.
Competence of ROCKAL employees, technical consultancyfrom International providers, development of new insulation materizals in our R&D division, all of these factors allow ROCKAL to approach each client individually and help us to meet every customer's needs.

RESEARCH & DEVELOPMENT

Al Alamia for insulation has fully equipped scientific research and development center located close to the production site and number of devices to test new materials. Our scientists are focused on the study of performance of building materials, prevention of their aging, increasing the possibilities of application by expanding the operating temperature range, developing additional functions, such as air purification, resistance to moss growth or increasing energy-effectiveness.
Al Alamia for Insulation has invested in the biggest Laboratories in Egypt with continuous improvement strategy and establishing learning center and academy for engineers and chemists to gain knowledge and experience in the waterproofing field. ROCKAL's facilities are equipped with latest technologies that will offer better quality waterproofing.

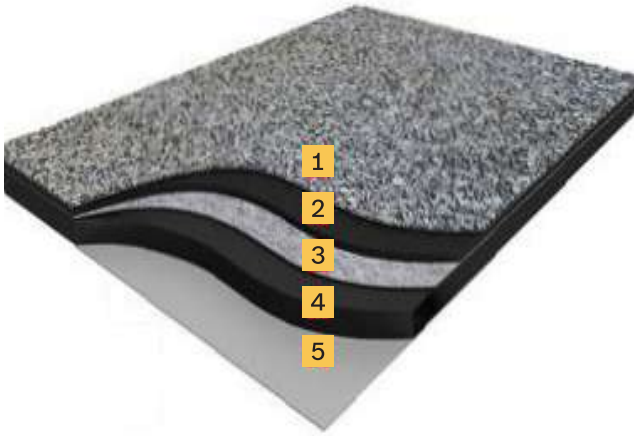
Laboratory on the factory operate on the base of modern equipment, which is used to study the physical and mechanical characteristics of materials in a wide temperature range, determine the structure and composition of raw materials, test the durability of materials.
Unique chromatograph equipment is used to determine the composition of bitumen for the production of roofing materials, and optimal selection of type and amount of modifying additives.
Research and implementation of advanced technologies allow us to bring new products and many product variations depending on needs of customer each year.
Fire safe materials and construction systems are one of the major priorities of ROCKAL Corporation. Our roofing and waterproofing membranes fully comply with strict European fire safety regulations. Bitumen and synthetic membranes are capable to resist flames and correspond to E class. Roofing systems are tested to evaluate the fire performance and meet the criteria for the Broof classification. ROCKAL stone wool matches the requirements of A1 Euroclass.
In cooperation with research and development centers, factories have obtained a number of product certificates issued by many prestigious institutes around the world.
The artificial climate chamber is used to study the aging process of materials. The method gives the possibility to predict waterproofing materials performance after many years of exploitation on the roof in just 2 or 3 months of testing.

MODIFIED BITUMEN WATERPROOFING MEMBRANE

INTRODUCTION

Polyester provides excellent elongation properties and grants optimal strength to the material Fiber Glass provides additional dimensional stability but does not grant elongation properties.
The special adhesive polymer-bitumen compound is used for the production of self-adhesive membranes The compound is covered with easily removable protective film.
Self-adhesive materials grant high speed of safe and cheap application and do not require any additional equipment and skills.

1. Top surface protection
2. Polymer-bitumen compound
3. Reinforcement
4. Polymer-bitumen compound
5. Lower surface protection



APP Modified

Atactic polypropylene & Isotactic polypropylene polymers

- Higher Softening point (high flow resistance at elevated temperatures).
- Better suited for high temperature climatic zones.
- Decreases penetration values, avoiding foot print problems during membrane installation.
- High resistance to UV & thermal aging (Poly olefin grades).
- Economical.

SBS Modified

Styrene Butadiene Styrene good abrasion resistance and good aging stability

- Good flexibility at low temperatures.
- High resistance against cracking.
- Good bitumen binding capability.
- Greater elastic recovery over a wide range of temperatures:

- Capable of accommodating extensive and repeated roof movement under thermal shock.

REINFORCEMENT

Type of Reinforcement:

Non-Woven Polyester Reinforcement

- High Tensile Strength
- Excellent elongation properties

Non-Woven Polyester Reinforcement Reinforced with Fiber Glass Filaments Composite

- Very High Tensile Strength
- Excellent elongation properties
- Good dimensional stability

Non-Woven Fiber Glass Reinforcement

- High Tensile Strength
- Good dimensional stability
- Easy saturation by bitumen

Compound Base

- High Tensile Strength
- Good dimensional stability

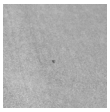
SURFACE FINISH

Polyethylene Film

- Rockal waterproofing membrane products cover with special thermo fusible film

Sand

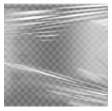
- Rockal waterproofing membrane products cover with special white / yellow protective sand

Sand
Yellow/White

Aluminum Foil

- The reflective surface that cover Rockal waterproofing membrane products protects the Elastomeric and the Plastomeric bitumen mixture from degradation caused by heat or UV rays.




Aluminum Foil
Embossed/Plain

Colored Granules or Slates

- The reflective surface that cover Rockal waterproofing membrane products protects the Elastomeric and the Plastomeric bitumen mixture from degradation caused by heat or UV rays.
- Granules and slates available of several colours Red/ Natural Grey/Green/.....



Slates
Red/Grey/Green

TORCH-ON APPLICATION

1- The surface must be cleaned of dust, debris, grease, leaves and should not have gaps and cracks or other irregularities.
Surface must be treated with ROCKAL primer before installation of waterproofing membrane.

2- During the installation, material and base must be heated by torch on all width of the roll; theplace of overlapping must be heated additionally.
During the proper installation all surface of the material sticks to the base and bitumen is leaking on edges on around 5–10 mm.

3- Cap sheet membrane should be positioned at adistance of min. 300 mm from overlaps of underlay membrane. Usually it is moved at a distance of 500 mm (50% of roll width). The distance betweendifferent end laps of rolls should be at least 500 mm.

4- The overlap along edges joint should be 100 mm.
Recommended overlap for single-layer application of bitumen membrane is 120 mm.
The overlap at sheet ends should not be less than 150 mm.
The minimum length of rolled material that can be installed is 1 m.

5- Roofer should remove coarse-grained slate in places of end laps of cap sheet membrane, because it significantly reduces the adhesion of the material.
The top side of the material (with slate) must be additionally heated by torch in places of such overlays.
Then the slate is pressed into bitumen by spatula.

AREAS OF APPLICATION

SINGLE-PLY MEMBRANE

Waterproofing of shopping centers, industrial or any other buildings with large roof area, where it is important to get the quick result (installation of a single-layer membrane takes less time than double-layer system).
An additional thickness of the membrane is required for the single-ply roofing.

CAP SHEET MEMBRANE

The top layer of a double-layer roof cladding.
It is used for waterproofing of flat roofs of residential, public or industrial buildings.
Double-layer system provides maximum reliability of the waterproofing layer.
The top side of the cap sheet membrane is protected from UV (usually by means of a coarse-grained slate or basalt granules).

UNDERLAY MEMBRANE

The bottom layer of a double-layer roof cladding.
It is used for waterproofing of flat roofs of residential, public or industrial buildings.

Double-layer system provides maximum reliability of the waterproofing layer.

The use of an underlay membrane allows decreasing the risk of leakages from the roof.

INDOOR WATERPROOFING

This group includes self-adhesive membranes and materials with fine-grained sand on the-bottom side that can be fixed to the surface by means of mastics in order to avoid using an open flame.

It is used for waterproofing of bathrooms, kitchens and other internal premises with high air humidity.

ANTI-ROOT PROTECTION

The top layer of roof cladding with special anti-root additives in the polymer-bitumen compound designed for the construction of “green roof” – a type of ballast roof with greenery on top.

It is also used for foundation waterproofing with additional protection from roots of plants located nearby.

UNDERLAY FOR PITCHED ROOFS

Underlay material for all kinds of pitched roofs with the protective covering on top (bitumen shingles, ceramic tiles, metal tiles, etc.).

Application of underlay membrane is required to grant an additional protection from any possible leakages.

VAPOR BARRIER

Vapor barrier for flat roofs of residential, public or industrial buildings suitable for all types of the substrate – concrete, metal, wood, etc.

It is necessary for protection of thermal insulation and roof cladding from moisture, which is formed due to a difference between indoor and outdoor temperature and air humidity.

01 APP MODIFIED BITUMEN MEMBRANE

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ROCK TORCH

APP Waterproofing Membrane

Description

ROCK TORCH is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Reinforcement composite with fiberglass.
Rock Torch proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resistance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

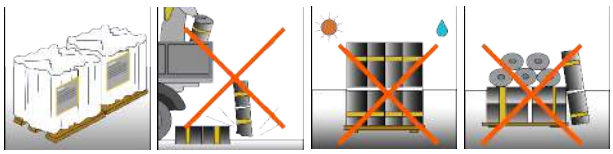
Application

ROCK TORCH waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK TORCH (CB)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	0 : ± 2	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1 ASTM D-5147	± 25%	650	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1 ASTM D-5147	± 25%	550	N/5cm	مقاومة الشد القصوي-عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	160	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	180	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	10	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	800	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	650/500	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 0.5	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

ROCKAL reserve the right of change or modify the technical specification or Products performance with out any prior notice due to any reason or research & development activities

- Note Products could vary in: Thickness - 3:4mm
- All ± Tolerances comply with UEAtc Directives.
- CB: Non-Woven Reinforcement composite with fiberglass (Compound Base)
- This TDS issued 01/2024 Revoke all previous issued.

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK STAR

APP Waterproofing Membrane

Description

ROCK STAR is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Polyester Carrier.

Rock Star proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resist ance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

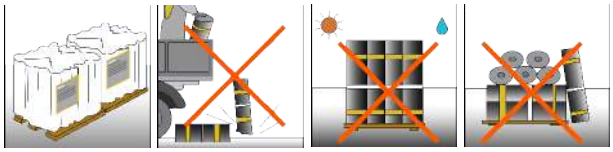
Application

ROCK Star waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK STAR (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 10	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	0 : ± 2	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	120	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	650	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	400	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	200	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	215	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	350	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	10	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	800	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	650/400	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

The manufacturer reserves the right to change the specification of the product or its performance, or the contents of the guide, without any prior notice.

- Note Products could vary in: Thickness - 3:4mm
- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK PLAST

APP Waterproofing Membrane

Description

Rock Plast is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Polyester Carrier.

Rock Plast proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resist ance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

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- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

Application

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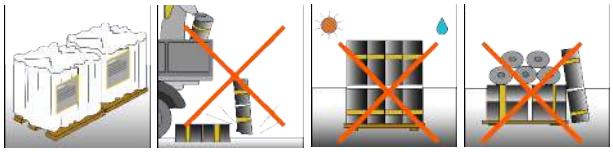
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK PLAST (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	0 : ± 2	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	750	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	550	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	220	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	230	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	15	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1000	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	750/550	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

The manufacturer reserves the right to change the specification of the product or its performance, or the contents of the guide, without any prior notice.

- Note Products could vary in: Thickness - 3:4mm
- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCKAL PLUS

APP Waterproofing Membrane

Description

Rockal Plus is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Polyester Carrier.

Rockal Plus proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resist ance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

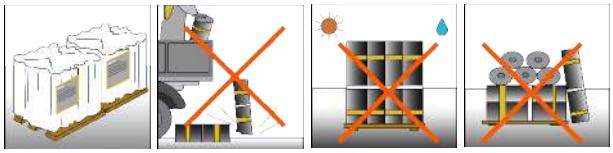
Application

Rockal Plus waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCKAL PLUS (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 2 : - 5	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	850	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	600	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	225	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	235	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	15	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1000	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	850/600	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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- Note Products could vary in: Thickness - 3:4mm
- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK ONE

APP Waterproofing Membrane

Description

Rock One is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Polyester Carrier.

Rock One proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resist ance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

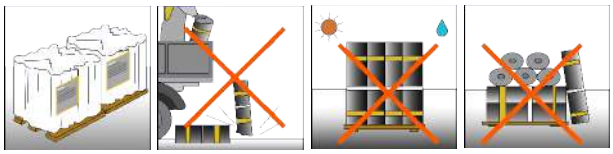
Application

Rock One waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK ONE (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 6 : - 10	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	120	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	900	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	600	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	50	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	225	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	235	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	650	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	20	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1250	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	900/600	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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- Note Products could vary in: Thickness - 3:4mm
- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK PREMIUM

APP Waterproofing Membrane

Description

Rock Premium is a Plastomeric high performance, prefabricated, modified bitumen waterproofing membrane consisting of proprietary waterproofing bitumen compound, reinforced with Non-Woven Polyester Carrier.

Rock Premium proprietary waterproofing compound is formulated with high grade bitumen modified with Atactic polypropylene (APP) to increase elasticity, flexibility, and enhanced with admixture of Thermoplastic materials to gain high heat resistance, good elongation and low temperature flexibility.
To improve the UV resist ance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

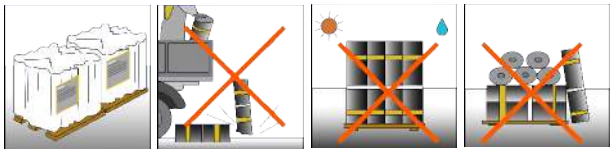
Application

Rock Premium waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, APP-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK PREMIUM (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	150	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 12 : - 15	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	120	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	1100	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	750	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	50	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	55	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	290	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	300	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	700	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	20	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1250	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	900/600	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	± 1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	20	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

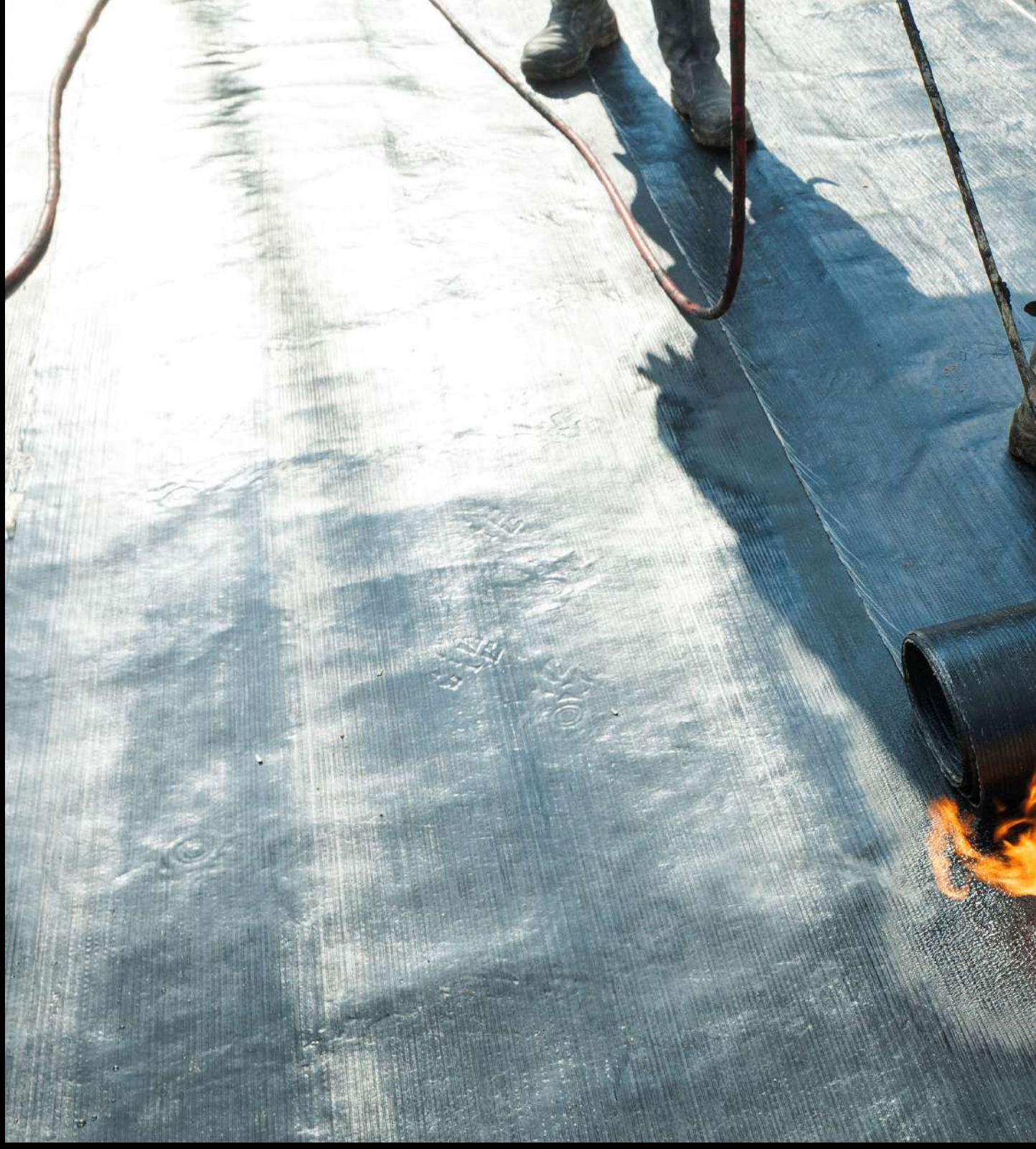
Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460



02 SBS MODIFIED BITUMEN MEMBRANE

www.rockal.org

ROCK FLEX

SBS Waterproofing Membrane

Description

ROCK FLEX is an Elastomeric high performance, prefabricated, modified bitumen membrane consisting of proprietary waterproofing bitumen compound, reinforced with non-woven polyester Carrier.

ROCK FLEX proprietary waterproofing compound is formulated with high grade bitumen modified with Styrene Butadiene Styrene (SBS) polymer which provides additional elasticity flexibility and dynamic resistance.
The membr ane withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing.
To improve the UV resistance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

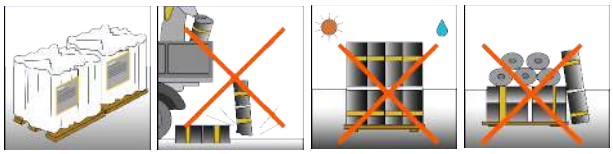
Application

ROCK FLEX waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, SBS-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK FLEX (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	110	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 7 : - 10	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	600	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	350	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	180	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	200	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	350	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	10	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	800	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	600/350	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	40	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

The manufacturer reserves the right to change the specification of the product or its performance, or the contents of the guide, without any prior notice.

- Note Products could vary in: Thickness - 3:4mm
- ± All Tolerances according to UEAtc Directives
- PES: Non-Woven Polyester Reinforcement Carrier
- This TDS issued 01/2024 Revoke all previous issued

Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK PROOF

SBS Waterproofing Membrane

Description

ROCK PROOF is an Elastomeric high performance, prefabricated, modified bitumen membrane consisting of proprietary waterproofing bitumen compound, reinforced with non-woven polyester Carrier.

ROCK PROOF proprietary waterproofing compound is formulated with high grade bitumen modified with Styrene Butadiene Styrene (SBS) polymer which provides additional elasticity flexibility and dynamic resistance.
The membr ane withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing.
To improve the UV resistance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

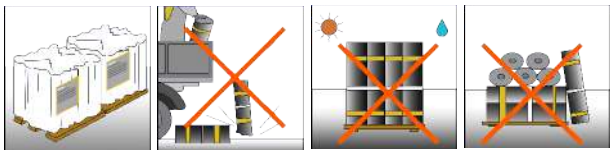
Application

ROCK PROOF waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, SBS-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK PROOF (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	120	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 10 : - 15	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	800	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	500	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	40	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	220	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	240	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	400	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	15	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1000	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	800/500	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	40	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK SHEILD

SBS Waterproofing Membrane

Description

ROCK SHEILD is an Elastomeric high performance, prefabricated, modified bitumen membrane consisting of proprietary waterproofing bitumen compound, reinforced with non-woven polyester Carrier.

ROCK SHEILD proprietary waterproofing compound is formulated with high grade bitumen modified with Styrene Butadiene Styrene (SBS) polymer which provides additional elasticity flexibility and dynamic resistance.
The membr ane withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing.
To improve the UV resistance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

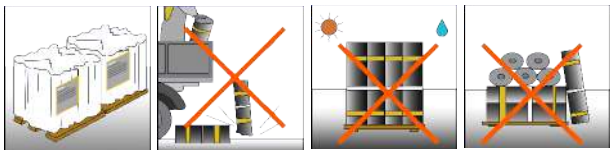
Application

ROCK SHEILD waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, SBS-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK SHEILD (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	120	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 15 : - 20	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	900	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	600	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	45	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	50	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	220	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	240	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	600	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	450	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	20	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1000	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	800/500	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	40	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

Packing

Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

ROCK PRO

SBS Waterproofing Membrane

Description

ROCK PRO is an Elastomeric high performance, prefabricated, modified bitumen membrane consisting of proprietary waterproofing bitumen compound, reinforced with non-woven polyester Carrier.

ROCK PRO proprietary waterproofing compound is formulated with high grade bitumen modified with Styrene Butadiene Styrene (SBS) polymer which provides additional elasticity flexibility and dynamic resistance.
The membr ane withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing.
To improve the UV resistance and durability for The Product, the membrane is coated with Mineral Stabilizers.

Key Features

- High U.V. resistance (Mineral Finish).
- Excellent thermal resistance
- Strong adhesion to substrate
- Proven water impermeability
- Chemical resistance to wide range of light acidic, alkaline solutions and bacteria.

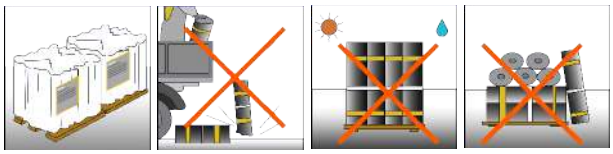
Application

ROCK PRO waterproofing membrane are used for a wide variety of application:

- Roofing or Re-roofing for covered single layer system or as a base layer for multi-layer systems.
- Wet area, Swimming Pool and Toilets.
- Underground waterproofing
- Flat and Sloped roofing

- The Product could be applied for waterproofing of foundations and engineering structures by torcing, hot air generator or by using special adhesives in both cold and hot applications.
- Cleaning the substrate surface is a must, till it be comes dry, smooth, and remove any particles.
- Based on surface conditions, a coat of ROCKAL primer product will be required prior to the appli cation of the membrane.
- According to the waterproofing system design and adhesion instruction, SBS-Product can be applied to the substrate fully bonded, semi bonded or loose laid.
- Overlapping is essential as follow, side laps from 8-10 cm and end laps from 12-15 cm.
- Please refer to the ROCKAL applicator guide for complete instruction on the application of the product

Transportation & Storage



- Rolls must be in an upright position on a pallet in a One-row height.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays, any source of heat and moisture.

ROCK PRO (PES)

Test	Test Method	Tolerance	Result	Unit	الإختبـــار
Thickness	EN 1849-1	±5%	4	mm	السمك
Width	EN 1848-1	±1%	1	m	العرض
Length	EN 1848-1	±1%	10	m	الطول
Straightness	EN 1848-1	-	± 6	mm	درجة الإستقامة
Softening Point (R&B)	ASTM D-36	≥	120	ºC	درجة التطرية
Flexibility at low temperature	EN 1109 ASTM D-5147	-	- 20:- 25	ºC	المرونة عند درجات الحرارة المنخفضة
Flow resistance at elevated temperature	EN 1110 ASTM D-5147	-10	110	ºC	الثبات عند درجات الحرارة العالية
Tensile Strength-Longitudinal	EN 12311-1ASTM D-5147	± 25%	1000	N/5cm	مقاومة الشد القصوي-طوليا
Tensile Strength-Transverse	EN 12311-1ASTM D-5147	± 25%	650	N/5cm	مقاومة الشد القصوي-عرضيا
Elongation @Break -Longitudinal	EN 12311-1ASTM D-5147	± 15	50	%	معدل الإستطالة - طوليا
Elongation @Break -Transverse	EN 12311-1ASTM D-5147	± 15	55	%	معدل الإستطالة - عرضيا
Tearing Strength-Longitudinal	EN 12310-1	≥	250	N	مقاومة التمزق-طوليا
Tearing Strength-Transverse	EN 12310-1	≥	280	N	مقاومة التمزق-عرضيا
Tensile Tear Resistance-Longitudinal	ASTM D-5147 D-4073	± 20%	650	N	مقاومة التمزق بطريقة الشد-طوليا
Tensile Tear Resistance-Transverse	ASTM D-5147 D-4073	± 20%	500	N	مقاومة التمزق بطريقة الشد-عرضيا
Resistance to Static Loading	EN 12730	≥	20	Kg	مقاومة الإختراق الإستاتيكى
Resistance to Impact Loading	EN 12691	≥	1250	mm	مقاومة الإختراق الديناميكى
Shear Resistance of joint L/T	EN 12317-1	± 20%	800/500	N/5cm	مقاومة الشد عند منطقة التركيب (طوليا/عرضيا)
Dimensional Stability L/T	EN 1107-1	-	1	%	ثبات الأبعاد
Adhesion to concrete	Pelage UEATC	-	40	N/5cm	قوة الإلتصاق بالاسطح الخرسانية
Water absorption	ASTM D-5147	≤	0.15	%	درجة إمتصاص الماء
Fire Classification - Extemal Fire Performance	EN 13501-5	-	F roof	-	تصنيف الحريق-أداء الحريق الخارجي
Reaction to fire	EN 13501-1	-	E	-	رد الفعل عند التعرض للنار
Water Impermeability at Low Pressure	EN 1928 method A	-	Pass	60Kpa	عدم نفاذية الماء للضغط المنخفض
Water Impermeability at High Pressure	EN 1928 method B	≥	Pass	200Kpa	عدم نفاذية الماء للضغط المرتفع
Thermal Ageing in air (in oven 4 weeks at 70 ± 2°C)	EN 1296	-	Pass	-	الإهتراء نتيجة التسخين
Ageing Due to Atmospheric Agents (U.V. Test weathering)	ASTM G 53 UNI 8202/29	-	Pass	-	مقاومة التقادم للاشعة فوق البنفسجية
Average loss of slates	EN 12039	≤	30	%	متوسط الفاقد من الحبيبات

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Surface Finish

Polyethylene Film
Aluminium Foil

Slates
Red/Grey/Green

Sand
Yellow/White

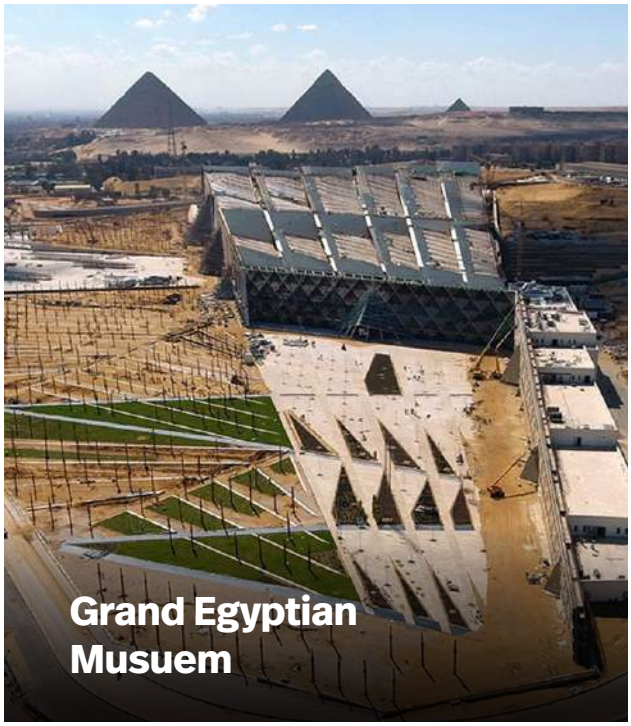
Packing

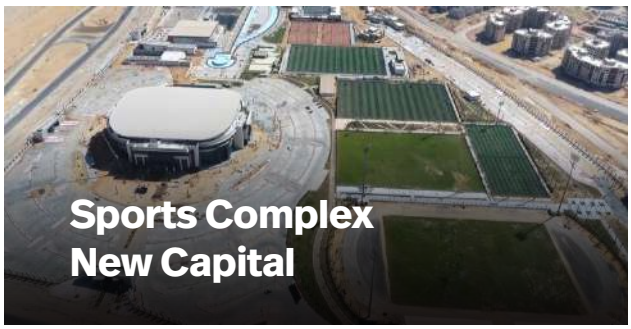
Item	Roll Size	Rolls/Pallet	Rolls/20 Container
3mm	(1x10)m	28	560
4mm	(1x10)m	23	460

03 ROCKAL PROJECTS

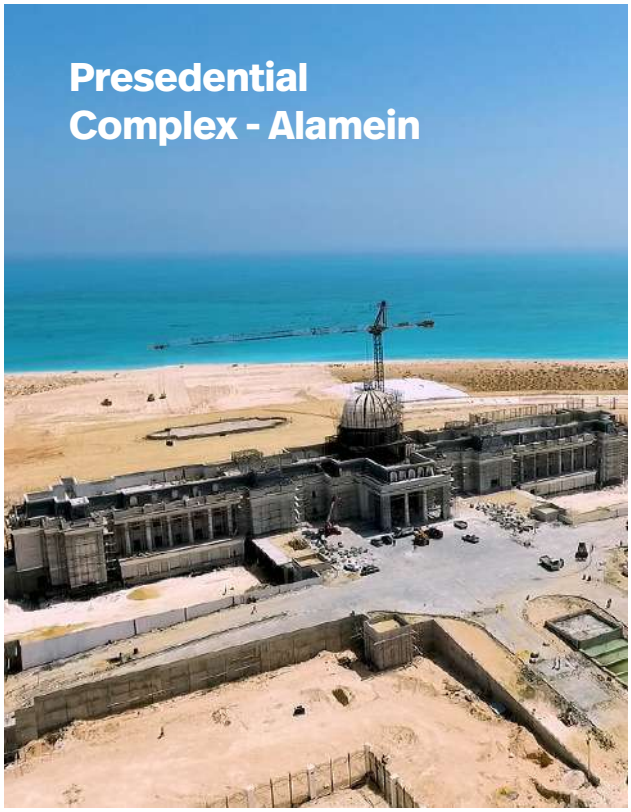
www.rockal.org

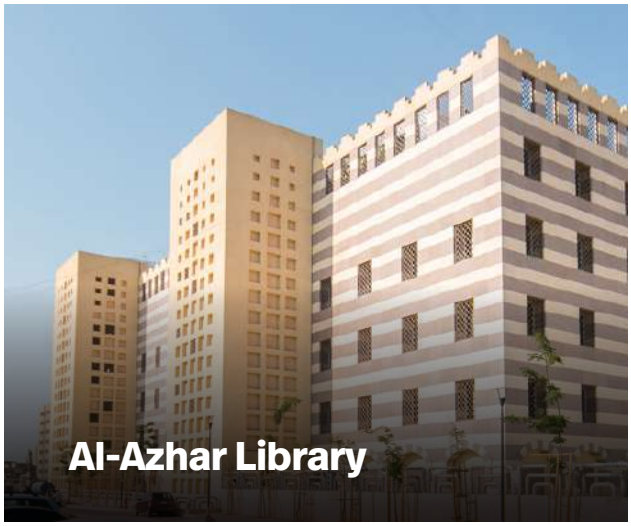
PROJECTS SUPPLIED BY ROCKAL





N.B. Projects mentioned are supplied by one or more products under the liscense of distribution by Al Alamia for Insulations Co , Al Alamia for Rockwool (ROCKAL) co. or manfactured by Al Alamia for Rockwool (ROCKAL) with the ROCKAL brand name.





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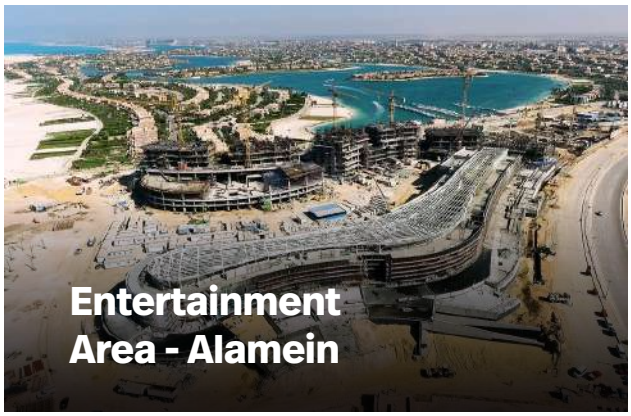
PROJECTS SUPPLIED BY ROCKAL



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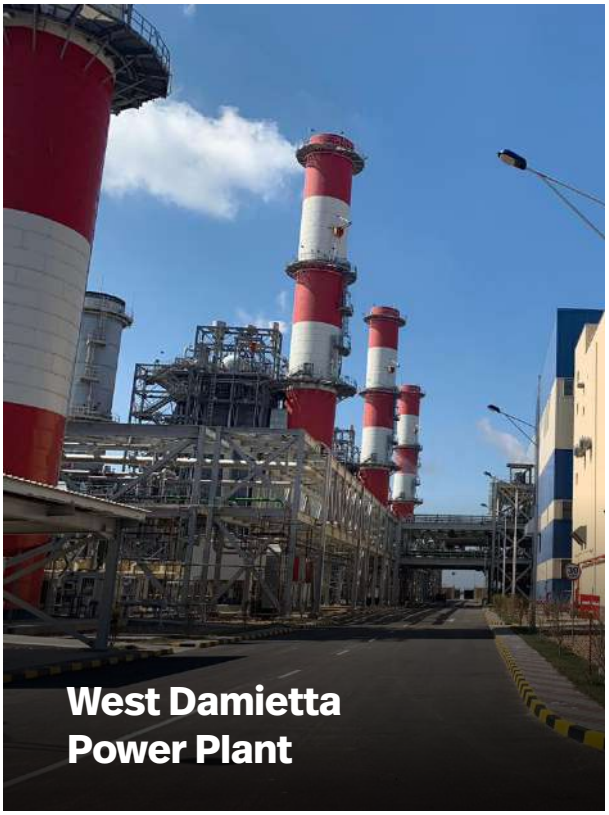
The Knowledge Hub University

Zewail City



West Damietta Power Plant

The Iconic Tower

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