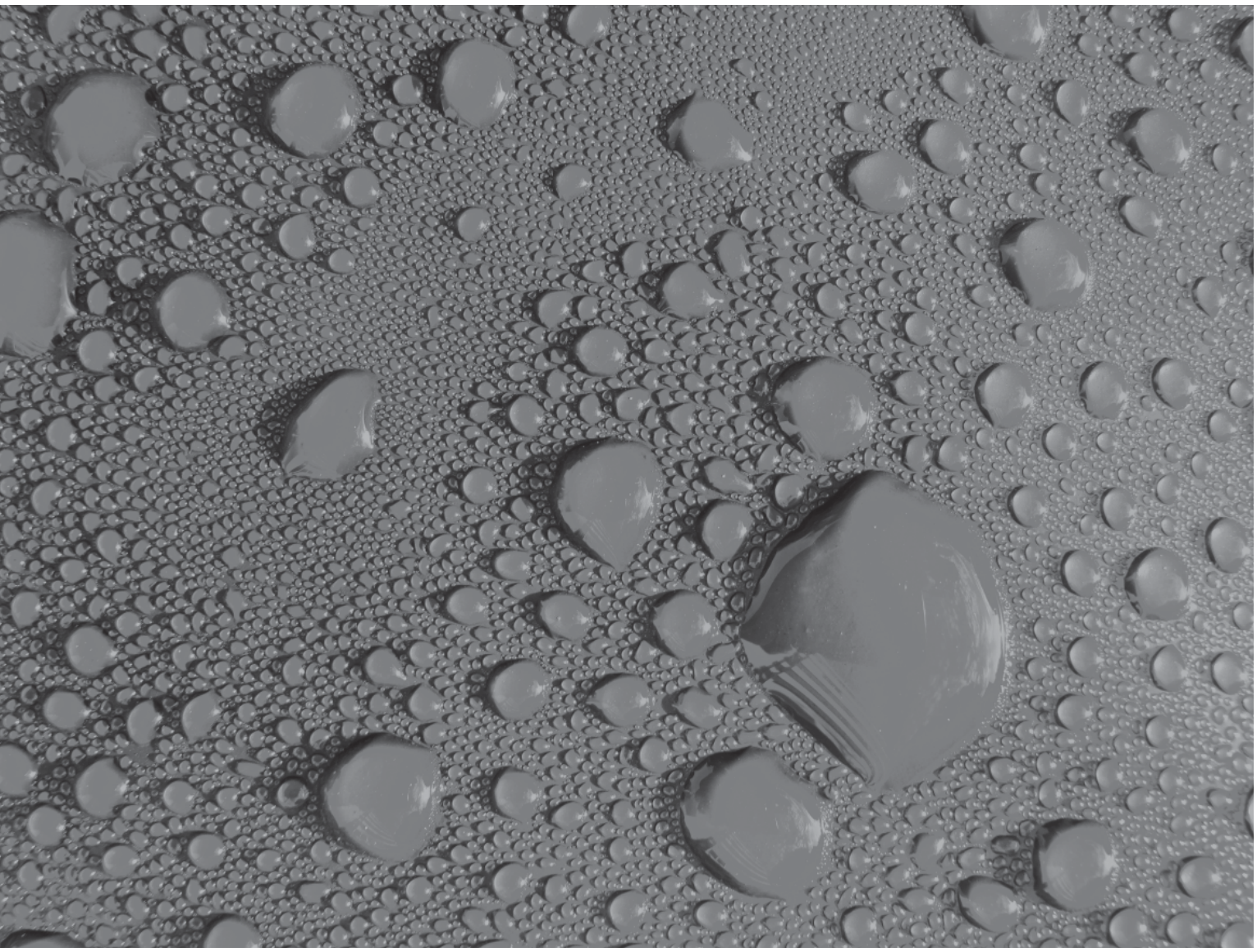
TECHNONICOL



GENERAL CATALOGUE

ROOFING, WATERPROOFING AND THERMAL INSULATION MATERIALS

KNOWLEDGE. EXPERIENCE. CRAFTSMANSHIP.

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TECHNONICOL Corporation is the largest Russian and European manufacturer and supplier of roofing, waterproofing, sound absorption and thermal insulation materials. The company was founded in 1992 and since then has accumulated considerable experience on the building materials market. We are proud to offer up-to-date materials and technologies that combine global expertise and elaboration of our own R&D centers. Wide range of high-quality materials and reliable solutions allows making a choice that is best suited to the customer both in price and in quality.

TECHNONICOL Corporation at present owns 53 production sites in Europe and Asia, retail network of 140 branches and representative offices in 37 countries. Company materials were already used in more than 200.000 sites in 95 countries around the world. It is an honor for us to be a partner for more than 500 independent distributors presenting 32 of our own brands.

PRODUCTION IMPROVEMENT

The key of the successful activity of TECHNONICOL resides in the high quality of research and control before, during and after production processes. All export plants of TECHNONICOL have passed UNI EN ISO 9001 and UNI EN ISO 14001 certification and strictly comply with the quality standards determined by these international requirements.

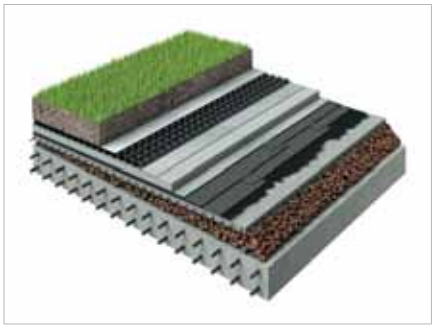
All plants of TECHNONICOL are committed to continuous improvement of pollution prevention and compliance with relevant environmental legislation:

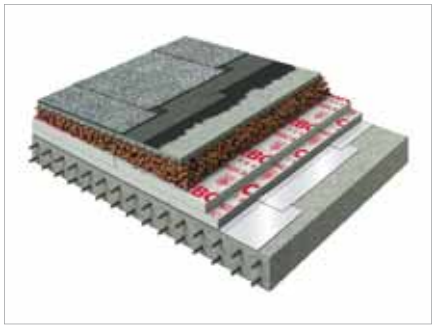
- All plants of the Corporation are subjected to state environmental appraisal at their design stage. The environment at our industrial sites is monitored daily. TECHNONICOL invests in waste free production, advanced equipment and environmental protection technologies.
- All products developed and supplied by TECHNONICOL meet environmental standards and are safe for humans and the environment.

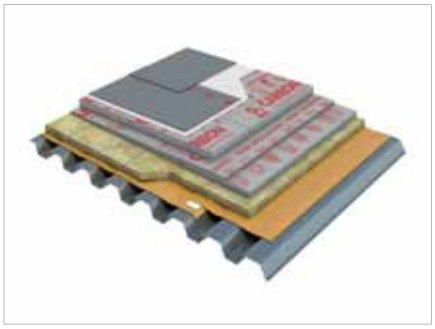
Our production capacities and equipment give us an ability to supply materials for large construction projects and to develop unique products based on individual requirements. Competence of employees, professional technical consultations, development of new materials in our own R&D centers, quality of products and solutions – all of these allow TECHNONICOL to approach each client individually and help us to meet every customer's expectations and needs.

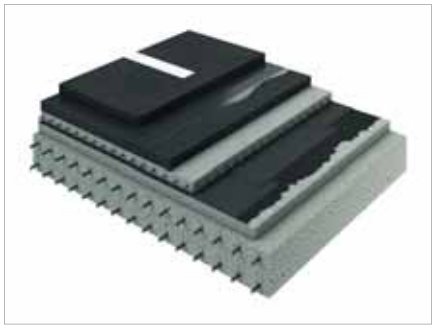
Improved customer service is also one of our priority principles. Leadership of TECHNONICOL products on the waterproofing market is achieved not only due to the quality of products we produce, but also to a high level of technical support.

RELIABLE SOLUTIONS









TECHNONICOL Corporation develops and promotes materials and systems that minimize energy-loss in the industrial sector and public utilities. We introduce construction systems, aimed at the creation of comprehensive protection of the structure from the foundation to the roof.

Products, offered by TECHNONICOL Corporation — high-quality waterproofing and thermal insulation materials — are fully compatible and can be used in proposed systems. Material compatibility with each other is one of the basic conditions to obtain a reliable complete insulation system. That is why our experts have developed a number of professional technical solutions for different types of projects. Here we follow three main principles: the compatibility of components, durability and reasonable price.

RESEARCH AND DEVELOPMENT

TECHNONICOL has six scientific research and development centers located close to the production sites and number of laboratories 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.

The main activities of the R&D centers are:

- creation of new roofing, waterproofing and thermal insulation materials;
- investigation: chemical, physical and other analysis, assistance in solving technological problems;
- modernization of production technology;
- improvement of methods for the analysis of raw materials and finished products, introduction of rapid methods;
- collaborative support provided to factories' laboratories.

Laboratories on the factories 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.

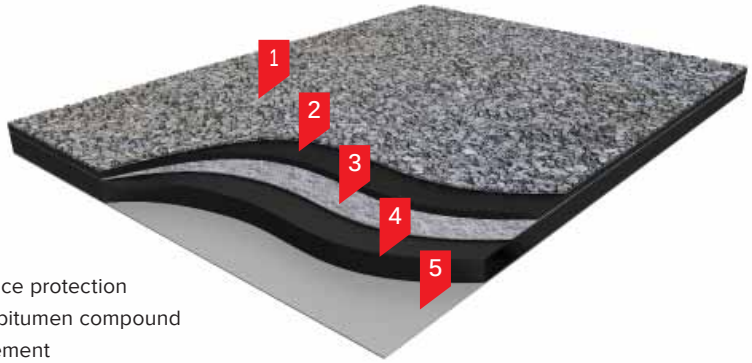
The artificial climate chamber is used to study the aging process of materials. The method gives the possibility to predict waterproofing materials performance after many years of exploitation on the roof in just 2 or 3 months of testing.

Fire safe materials and construction systems are one of the major priorities of TECHNONICOL 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. TECHNONICOL stone wool matches the requirements of A1 Euroclass.

Research and implementation of advanced technologies allow TECHNONICOL to bring new products and many product variations depending on needs of customer each year.

In cooperation with research and development centers, factories have obtained a number of product certificates issued by many prestigious institutes around the world.

POLYMER-BITUMEN MEMBRANES



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

The most widespread materials for creation of the waterproofing layer are the polymer-bitumen roll-fed membranes. This is due to a relative simplicity of installation, popularity of the technology, durability of the material and stability of the factory-set technical parameters. Polymer-bitumen membranes are commonly used for waterproofing of foundations, engineering structures, roads, bridge decks and flat roofs. These materials could also be used as an underlay for pitched roofs and as a vapor barrier.

Polymer-bitumen membranes undergo effects of many unfavourable factors from the external environment. Changes in the surrounding temperature can cause deformations of the material and the base on which it is installed. The ability to withstand such deformations is the most important characteristic of roofing and waterproofing material and it depends on many components used on the production stage.

POLYMER-BITUMEN COMPOUND

The compound is a specially formulated mixture of bitumen and polymers. The main difference between compound types is the kind of polymer used:

- **SBS** polymer provides additional flexibility and dynamic resistance to the material.
- **APP** polymer provides additional flow resistance that makes it possible to use the material in a very hot climate.
- Special anti-root additives can be added to the polymer-bitumen compound to make it resistant to root penetration and ensure the reliable waterproofing of green roofs and foundations.

REINFORCEMENT


- **Polyester** provides excellent elongation properties and grants optimal strength to the material.
- **Glass fiber** provides additional dimensional stability but does not grant elongation properties.

POLYMER FILM


- Thin polymer film is used for underside surface protection from sticking in the roll. The film is covered with special graphics indicators for easier and more reliable torch-on installation. The film is melting during the heating. If graphics becomes completely fused (surface is all black), the material is overheated. The material is heated properly when graphics is deformed, but visible.
- Polymer film without graphic elements is used as top surface protection of underlay membranes and materials, which were designed for waterproofing of foundations and engineering structures.
- Perforated polymer film can be used as underside protection to ensure even points of adhesion distribution and increase the speed of installation of the material.

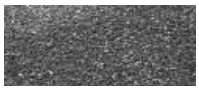
SELF-ADHESIVE SURFACE

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. Such materials can also be used in conditions, when the standard torch-on application is forbidden (expanded / extruded polystyrene or wooden base, indoor waterproofing).

FINE-GRAINED SAND OR TALCUM


Fine-grained sand or talcum can be used to cover the top or underside surface of the membrane. Such type of covering allows installation by means of hot or cold applied mastics or by torching.

SLATE



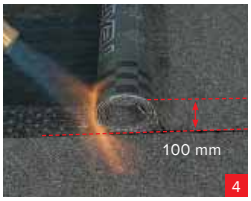

The coarse-grained mineral slate with special hydrophobic treatments protects the material from damage by ultraviolet radiation during the whole service life of the membrane. It is used for cap sheet membranes in double-layer waterproofing systems.

Slate can be supplied in various colors that will provide nice aesthetic appearance. Standard colors include natural grey, red, green and white, while other colors are available on request.

SPECIAL COVERING


Eco-friendly product line ENVIRO makes a positive impact on the environment – thanks to the surface with special additives it helps to purify city air, increase energy efficiency of buildings and protect the roof from moss overgrowing. These materials successfully and effectively combine environmental friendliness and technologies aimed at improving living standards and reducing the operation cost of the facility. ENVIRO product line was created with the real care about the future of our planet.

TORCH-ON APPLICATION

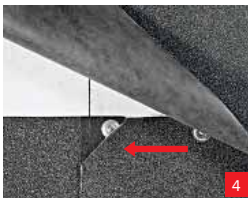


1. The surface must be cleaned of dust, debris, grease, leaves and should not have gaps and cracks or other irregularities. Surface must be treated with primer before installation of waterproofing material.
2. During the installation, material and base must be heated by torch on all width of the roll; the place 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 a distance 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 between different 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.

APPLICATION WITH MASTIC

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 primer before applying the mastic.
2. Spread the attaching mastic to the base with a special spatula following recommendations of layer thickness. It is recommended to use a special cold-applied roofing mastic, but hot-applied mastic can also be used. Hot-applied mastic should be pre-melted at a temperature of 180°C before application on to the base.
   IMPORTANT! Mastic is always applied to the surface, not on the material.
3. Roll-fed material should be installed on the spread mastic layer avoiding creases and bubbles.
   IMPORTANT! Only materials with a coating of fine-grained sand are suitable for mastic-application.
4. Straighten the roll-fed material by smoothing it with a brush to avoid creases or bubbles of air on the material. Then fix the completely glued roll with a heavy roller.
5. Press down the material on overlays with a heavy roller until mastic flows out of the joint. Mastic should be flowed out from the overlay for 7–10 mm for the best joint quality.

INSTALLATION OF A SINGLE-PLY BITUMEN MEMBRANE



1. Automatic equipment such as Leister Varimat may be used for overlaps welding in the process of installation. In this case it is recommended to prepare an additional mountable strip. It will increase convenience and speed of installation. At the end next to mountable strip end joints do not need to be staggered. This technological method can be also used in the process of torch-on application.
2. Side overlay should be not less than 120 mm, end laps overlay should be 150 mm. Distance between staggered overlays (if needed) must be at least 500 mm. On a shaped decking roof single layer membrane should be installed across flooring waves.
3. Corners of rolls should be cut in places of T-shaped joints.
4. Corners cutting allows to increase the quality of welded joints and to avoid lack of material welding in such places.
5. Places that can not be welded by automatic equipment are welded by hand heat gun.

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.

FOUNDATIONS AND BLIND SIDES OF BELOW-GRADE WALLS

Waterproofing of foundations, blind sides of below-grade walls and underground structures of all type. It protects the construction from groundwater, stormwater runoff, floods, etc. and increases the service life of the whole structure in general.

BRIDGES AND ROADS WATERPROOFING

Waterproofing of concrete and steel bridge decks, flyovers, car parkings and other traffic areas. The membrane should have an enhanced physical and mechanical properties to withstand the operational movements of the substrate.

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.

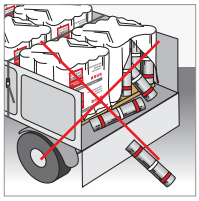
UNDERLAY FOR PITCHED ROOFS

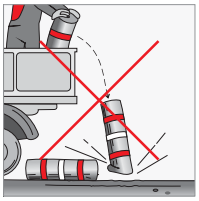
Underlay material for all kinds of pitched roofs with the protective covering on top (bitumen shingles, ceramic tiles, metal tiles, etc.). Application of underlay membrane is required to grant an additional protection from any possible leakages.

VAPOR BARRIER

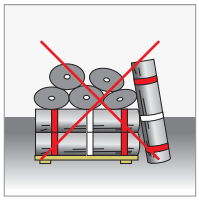
Vapor barrier for flat roofs of residential, public or industrial buildings suitable for all types of the substrate – concrete, metal, wood, etc. It is necessary for protection of thermal insulation and roof cladding from moisture, which is formed due to a difference between indoor and outdoor temperature and air humidity.

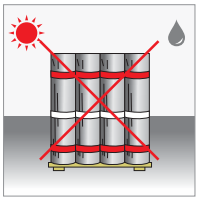
TRANSPORTATION AND STORAGE





- Rolls must be transported in closed vehicles in an upright position on a pallet in a 1-row height.
- Ropes should be used to fasten the pallet in order to avoid film damage.
- Avoid falls or other mechanical impacts during loading and unloading of rolls.





- Roll’s protective film should not be damaged after unloading.
- Rolls should be stored upright on pallets in a 1-row height.
- Storage of rolls in a horizontal position is prohibited.
- Protect the rolls from direct UV-rays and moisture.
- Keep the minimum distance of 1 m from any source of heat.

REFERENCES

Skaraborg, Sweden
JULA, SHOPING CENTER

Jakarta, Indonesia
CIBIS TOWER

Horní Počernice, Czech Republic
P3 PARK, HALL IX

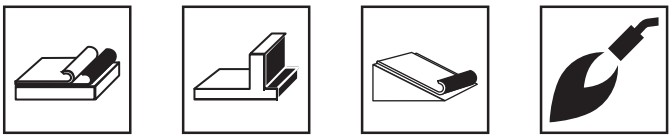
ULTRAPLAST

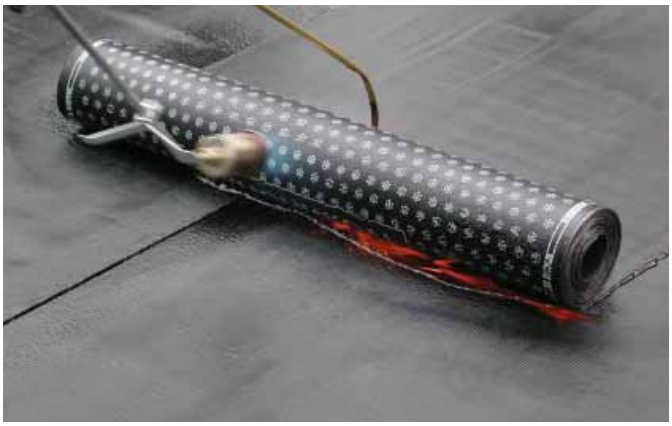
APP MODIFIED BITUMEN ROOFING AND WATERPROOFING UNDERLAY MEMBRANE

APP-modified bitumen membrane ULTRAPLAST is designed for installation as the bottom layer in double-layer roofing system on buildings and constructions, for waterproofing of foundations and engineering structures. Can be used as an underlay for bitumen shingles on pitched roofs. Used for new construction or repair.

The material withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing. APP polymer provides additional flow resistance that makes it possible to use the material in a very hot climate.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by a polymer film.





PROPERTIES	TEST METHOD	ULTRAPLAST A 2 I 3 I 4 mm	ULTRAPLAST B 2 I 3 I 4 mm	ULTRAPLAST C 2 I 3 I 4 mm
Thickness, mm	EN 1849-1	2.0±0.20 I 3.0±0.20 I 4.0±0.20		
Mass per unit area, kg/m²	EN 1849-1	2.8±0.28 I 3.8±0.38 I 5.1±0.48		
Length x width, m	EN 1848-1	15 x 1 I 10 x 1 I 10 x 1		
Softening point, °C	ASTM D36	150±5	150±5	150±5
Flexibility at low temperature, °C	EN 1109-1	≤-6	≤-2	≤0
Flow resistance at elevated temperature, °C	EN 1110	≥120	≥120	≥120
Elongation L / T, %	ASTM D5147	45±9 / 50±10	40±8 / 45±9	40±8 / 45±9
Tensile strength L / T, N/50 mm	ASTM D5147	850±170 / 650±130	750±150 / 600±120	650±130 / 400±80
Tear resistance L / T, N	ASTM D4073	350±100 / 350±100	300±100 / 300±100	300±100 / 300±100
Reinforcement type	-	polyester	polyester	polyester
Protective covering type on the top	-	polymer film	polymer film	polymer film
Protective covering type on the bottom	-	polymer film	polymer film	polymer film

ULTRAPLAST grey mineral

APP MODIFIED BITUMEN ROOFING AND WATERPROOFING CAP SHEET MEMBRANE

APP-modified bitumen membrane ULTRAPLAST grey mineral is designed for installation as the top layer in double-layer roofing system on buildings and constructions. Can be used for new construction or repair.

The material withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing. APP polymer provides additional flow resistance that makes it possible to use the material in a very hot climate.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by a coarse-grained slate with special hydrophobic treatment that protects the material from damage by ultraviolet radiation during the whole service life of the membrane.

PROPERTIES	TEST METHOD	ULTRAPLAST A 3 I 4 mm grey mineral	ULTRAPLAST B 3 I 4 mm grey mineral	ULTRAPLAST C 3 mm grey mineral
Thickness, mm	EN 1849-1	3.0±0.20 I 4.0±0.20	3.0±0.20 I 4.0±0.20	3.0±0.20
Mass per unit area, kg/m²	EN 1849-1	3.8±0.38 I 5.1±0.48	3.8±0.38 I 5.1±0.48	3.8±0.38
Length x width, m	EN 1848-1	10 x 1	10 x 1	10 x 1
Softening point, °C	ASTM D36	150±5	150±5	150±5
Flexibility at low temperature, °C	EN 1109-1	≤-6	≤-2	≤0
Flow resistance at elevated temperature, °C	EN 1110	≥120	≥120	≥120
Elongation L / T, %	ASTM D5147	45±9 / 50±10	40±8 / 45±9	40±8 / 45±9
Tensile strength L / T, N/50 mm	ASTM D5147	850±170 / 650±130	750±150 / 600±120	650±130 / 400±80
Tear resistance L / T, N	ASTM D4073	350±100 / 350±100	300±100 / 300±100	300±100 / 300±100
Reinforcement type	-	polyester	polyester	polyester
Protective covering type on the top	-	coarse-grained slate	coarse-grained slate	coarse-grained slate
Protective covering type on the bottom	-	polymer film	polymer film	polymer film

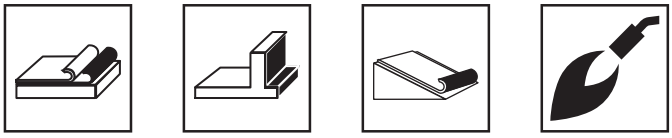
ULTRAFLEX

SBS MODIFIED BITUMEN ROOFING AND WATERPROOFING UNDERLAY MEMBRANE

SBS-modified bitumen membrane ULTRAFLEX is designed for installation as the bottom layer in double-layer roofing system on buildings and constructions, for waterproofing of foundations and engineering structures. Can be used as an underlay for bitumen shingles on pitched roofs. Used for new construction or repair.

The material withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing. SBS polymer provides additional flexibility and dynamic resistance.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by a polymer film.



PROPERTIES	TEST METHOD	ULTRAFLEX A 2 mm	ULTRAFLEX A 3 mm	ULTRAFLEX A 4 mm
Thickness, mm	EN 1849-1	2.0±0.20	3.0±0.20	4.0±0.20
Mass per unit area, kg/m²	EN 1849-1	2.8±0.28	3.8±0.38	5.1±0.48
Length x width, m	EN 1848-1	15 x 1	10 x 1	10 x 1
Softening point, °C	ASTM D36	≥120	≥120	≥120
Flexibility at low temperature, °C	EN 1109-1	≤-10	≤-10	≤-10
Flow resistance at elevated temperature, °C	EN 1110	≥100	≥100	≥100
Elongation L / T, %	ASTM D5147	45±9 / 50±10	45±9 / 50±10	45±9 / 50±10
Tensile strength L / T, N/50 mm	ASTM D5147	850±170 / 650±130	850±170 / 650±130	850±170 / 650±130
Tear resistance L / T, N	ASTM D4073	350±100 / 350±100	350±100 / 350±100	350±100 / 350±100
Reinforcement type	-	polyester	polyester	polyester
Protective covering type on the top	-	polymer film	polymer film	polymer film
Protective covering type on the bottom	-	polymer film	polymer film	polymer film

ULTRAFLEX grey mineral

SBS MODIFIED BITUMEN ROOFING AND WATERPROOFING CAP SHEET MEMBRANE

SBS-modified bitumen membrane ULTRAFLEX grey mineral is designed for installation as the top layer in double-layer roofing system on buildings and constructions. Can be used for new construction or repair.

The material withstands temperature fluctuations and high mechanical loads providing a long-term, reliable and effective waterproofing. SBS polymer provides additional flexibility and dynamic resistance.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by a coarse-grained slate with special hydrophobic treatment that protects the material from damage by ultraviolet radiation during the whole service life of the membrane.

PROPERTIES	TEST METHOD	ULTRAFLEX A 3 mm grey mineral	ULTRAFLEX A 4 mm grey mineral
Thickness, mm	EN 1849-1	3.0±0.20	4.0±0.20
Mass per unit area, kg/m²	EN 1849-1	3.8±0.38	5.1±0.48
Length x width, m	EN 1848-1	10 x 1	10 x 1
Softening point, °C	ASTM D36	≥120	≥120
Flexibility at low temperature, °C	EN 1109-1	≤-10	≤-10
Flow resistance at elevated temperature, °C	EN 1110	≥100	≥100
Elongation L / T, %	ASTM D5147	45±9 / 50±10	45±9 / 50±10
Tensile strength L / T, N/50 mm	ASTM D5147	850±170 / 650±130	850±170 / 650±130
Tear resistance L / T, N	ASTM D4073	350±100 / 350±100	350±100 / 350±100
Reinforcement type	-	polyester	polyester
Protective covering type on the top	-	coarse-grained slate	coarse-grained slate
Protective covering type on the bottom	-	polymer film	polymer film

ULTRAFLEX GREEN

SBS MODIFIED BITUMEN ROOFING AND WATERPROOFING MEMBRANE FOR GREEN ROOF CONSTRUCTION

SBS-modified bitumen membrane ULTRAFLEX GREEN is designed for waterproofing of green roofs and underground engineering structures. The material has an additional mechanical protection on top, which makes it resistant to damage caused by roots of plants and ensures reliable waterproofing. Special chemical compound prevents roots penetration, but at the same time does not have a negative effect on plants or environment.

ULTRAFLEX GREEN can be used both for construction of green roofs and for foundation waterproofing with additional protection from roots of plants located nearby.

The green roof reduces energy costs, increases real estate value and service life of the roof, serves as a sound insulation layer. It also creates aesthetically attractive landscape and recreational space, increases biodiversity in urban areas, regulates the temperature and humidity in the building and the environment, purifies the air and the rainwater. Construction of green roofs may be supported by the government via grants or reduced taxes.

PROPERTIES	TEST METHOD	ULTRAFLEX GREEN
Thickness, mm	EN 1849-1	3.3±0.20
Mass per unit area, kg/m²	EN 1849-1	4.0±0.25
Length x width, m	EN 1848-1	10 x 1
Softening point, °C	ASTM D36	≥120
Flexibility at low temperature, °C	EN 1109-1	≤-25
Flow resistance at elevated temperature, °C	EN 1110	≥100
Elongation L / T, %	ASTM D5147	50±25 / 50±25
Tensile strength L / T, N/50 mm	ASTM D5147	700±100 / 500±100
Tear resistance L / T, N	ASTM D4073	180±30 / 180±30
Reinforcement type	-	polyester
Protective covering type on the top	-	thick polymer film
Protective covering type on the bottom	-	polymer film

TECHNONICOL ENVIRO AIR

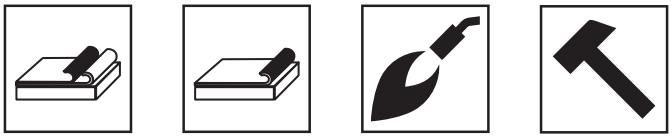
SBS MODIFIED BITUMEN ROOFING AND WATERPROOFING MEMBRANE FOR REDUCING AIR POLLUTION

TECHNONICOL ENVIRO AIR is a roofing and waterproofing SBS-modified bitumen membrane with a special feature of air purification from harmful nitrogen oxides (NO_x). Hydrophobized slate used as the top protective layer is covered with titanium dioxide (TiO_2) and special additives.

Designed for installation as the top layer in double-layer roofing system or as a single-ply polymer-bitumen roofing membrane on buildings and constructions. Can be used for new construction or repair.

Roofing material TECHNONICOL ENVIRO AIR has the following advantages:

- actively influences the reduction of toxic NO_x gas in the air;
- the coating protects the material against the penetration of UV radiation and destruction of bitumen compound;
- contributes to the destruction of organic contaminants on the surface (bird droppings, fungus spores, bacteria).



PROPERTIES	TEST METHOD	TECHNONICOL ENVIRO AIR
Thickness, mm	EN 1849-1	4.0±0.10
Mass per unit area, kg/m²	EN 1849-1	5.0±0.25
Length x width, m	EN 1848-1	8 x 1
Softening point, °C	ASTM D36	≥120
Flexibility at low temperature, °C	EN 1109-1	≤-25
Flow resistance at elevated temperature, °C	EN 1110	≥100
Elongation L / T, %	ASTM D5147	50±25 / 50±25
Tensile strength L / T, N/50 mm	ASTM D5147	700±100 / 500±100
Tear resistance L / T, N	ASTM D4073	180±30 / 180±30
Reinforcement type	-	polyester
Protective covering type on the top	-	coarse-grained slate with special additives
Protective covering type on the bottom	-	polymer film

ULTRAPLAST BRIDGE

APP MODIFIED BITUMEN WATERPROOFING MEMBRANE FOR BRIDGE AND FLYOVER CONSTRUCTION

APP-modified bitumen membrane ULTRAPLAST BRIDGE is designed for waterproofing of steel orthotropic plate and reinforced concrete slab of carriageway when asphalt concrete (up to +220°C) is laid directly on the waterproofing layer. Can be also used as a single-layer waterproofing of the foundation.

ULTRAPLAST BRIDGE is a waterproofing material produced by the two-sided placing of a special high-quality polymer-bitumen binder on an extra strong polyester base. The material has the highest physical and mechanical properties and can withstand very high temperatures.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by fine-grained sand.

PROPERTIES	TEST METHOD	ULTRAPLAST BRIDGE
Thickness, mm	EN 1849-1	5.2±0.10
Mass per unit area, kg/m²	EN 1849-1	5.8±0.25
Length x width, m	EN 1848-1	8 x 1
Softening point, °C	ASTM D36	≥150
Flexibility at low temperature, °C	EN 1109-1	≤-25
Flow resistance at elevated temperature, °C	EN 1110	≥140
Elongation L / T, %	ASTM D5147	≥40 / ≥40
Tensile strength L / T, N/50 mm	ASTM D5147	≥1000 / ≥900
Tear resistance L / T, N	ASTM D4073	-
Reinforcement type	-	polyester
Protective covering type on the top	-	fine-grained sand
Protective covering type on the bottom	-	polymer film

ULTRAFLEX BRIDGE

SBS MODIFIED BITUMEN WATERPROOFING MEMBRANE FOR BRIDGE AND FLYOVER CONSTRUCTION

SBS-modified bitumen membrane ULTRAFLEX BRIDGE is designed for waterproofing of reinforced concrete slab of the carriageway on bridge constructions and other traffic areas. Can be also used for waterproofing of the foundation.

ULTRAFLEX BRIDGE is the waterproofing material produced by the two-sided placing of a high-quality polymer-bitumen binder on a polyester base. The material has additional durability and resistibility features thanks to the special formula of polymer-bitumen binder and increased thickness.

On the bottom side, the material is covered by a polymer film with special graphic elements, melting of which indicates the proper material heating. On the top side, the material is covered by a fine-grained sand.

PROPERTIES	TEST METHOD	ULTRAFLEX BRIDGE
Thickness, mm	EN 1849-1	5.0±0.20
Mass per unit area, kg/m²	EN 1849-1	6.4±0.25
Length x width, m	EN 1848-1	8 x 1
Softening point, °C	ASTM D36	≥110
Flexibility at low temperature, °C	EN 1109-1	≤-25
Flow resistance at elevated temperature, °C	EN 1110	≥100
Elongation L / T, %	ASTM D5147	≥40 / ≥40
Tensile strength L / T, N/50 mm	ASTM D5147	≥600 / ≥600
Tear resistance L / T, N	ASTM D4073	-
Reinforcement type	-	polyester
Protective covering type on the top	-	fine-grained sand
Protective covering type on the bottom	-	polymer film

ULTRAFLEX SA NB

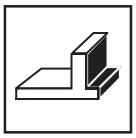
SBS MODIFIED BITUMEN SELF-ADHESIVE NON-REINFORCED MEMBRANE FOR WATERPROOFING WITHOUT TORCHING

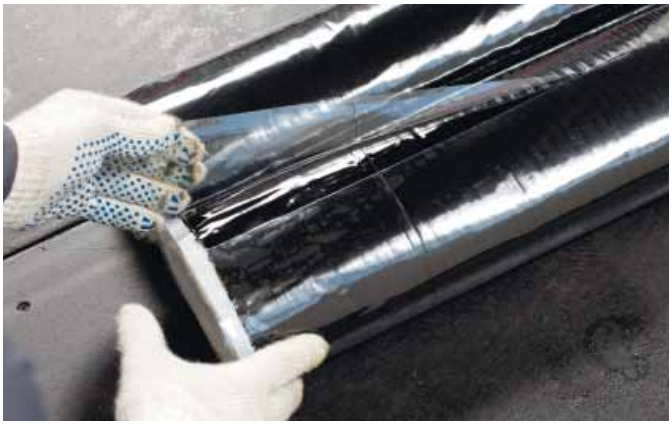
Self-adhesive non-reinforced SBS-modified bitumen membrane ULTRAFLEX SA NB is designed for waterproofing of foundations and engineering structures, indoor waterproofing.

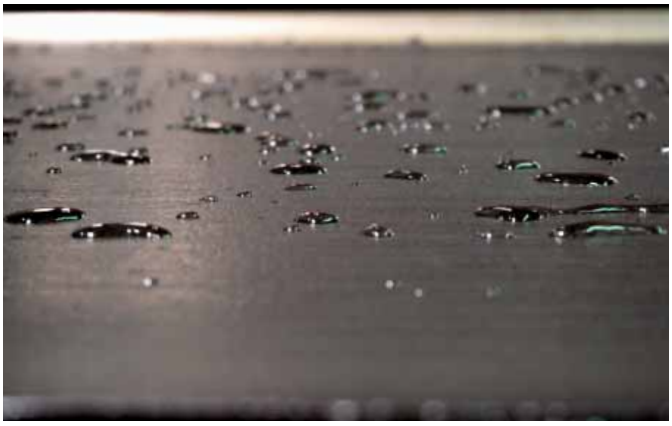
The material is produced by placing a special self-adhesive polymer-bitumen binder on a thick polymer film that covers the material on top. The other side of the material is covered with a removable protective film. The absence of a carrier is a key feature of this material that makes it very elastic and flexible.

Waterproofing material ULTRAFLEX SA NB has the following advantages:

- can be used on surfaces, where the standard torch-on application is forbidden (wood, XPS, etc.);
- high speed of application;
- no need for any additional equipment and skills;
- safe and cheap application – the membrane is applied without the use of gas and flame;
- can be used for indoor waterproofing in a closed area.







PROPERTIES	TEST METHOD	ULTRAFLEX SA NB
Thickness, mm	EN 1849-1	1.5±0.10
Mass per unit area, kg/m^2	EN 1849-1	1.5±0.25
Length x width, m	EN 1848-1	20 x 1
Softening point, °C	ASTM D36	≥100
Flexibility at low temperature, °C	EN 1109-1	≤-15
Flow resistance at elevated temperature, °C	EN 1110	≥85
Elongation L / T, %	ASTM D5147	≥200 / ≥200
Determination of shear resistance of joints, kN/m	EN 12317-1	≥2.0
Peel resistance of joints: overlap to overlap / overlap to film, N/50 mm	EN 12316-1	- / ≥25
Reinforcement type	-	no base
Protective covering type on the top	-	thick polymer film
Protective covering type on the bottom	-	anti-adhesion film

ULTRAFLEX SA NBS

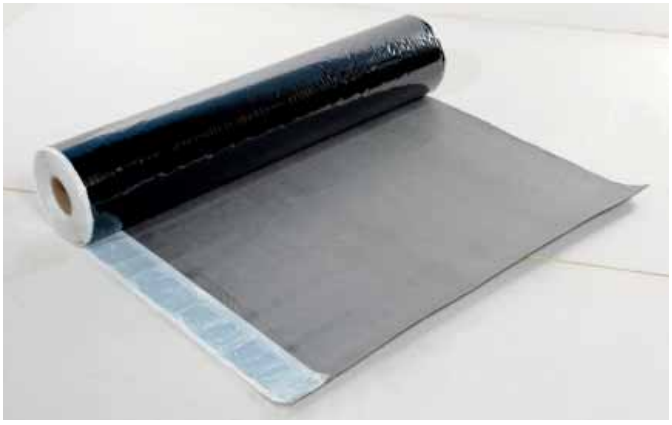
SBS MODIFIED BITUMEN SELF-ADHESIVE NON-REINFORCED MEMBRANE FOR INDOOR WATERPROOFING

Self-adhesive non-reinforced SBS-modified bitumen membrane ULTRAFLEX SA NBS with spunbond as the top protective layer is designed for indoor waterproofing.

The material is produced by placing a special self-adhesive binder on a spunbond that covers the material on top. The other side of the material is covered with a removable protective film.

Waterproofing material ULTRAFLEX SA NBS has the following advantages:

- used for indoor waterproofing with the direct installation of ceramic tiles onto the material without the need of protective sand cement screed;
- high speed of application;
- safe and cheap application – the membrane is applied without the use of gas and flame;
- no need for any additional equipment and skills;
- cold application method prevents smoke, odors and noise and makes it suitable for indoor works.



PROPERTIES	TEST METHOD	ULTRAFLEX SA NBS
Thickness, mm	EN 1849-1	1.5±0.10
Mass per unit area, kg/m²	EN 1849-1	1.5±0.25
Length x width, m	EN 1848-1	20 x 1
Softening point, °C	ASTM D36	≥100
Flexibility at low temperature, °C	EN 1109-1	≤-15
Flow resistance at elevated temperature, °C	EN 1110	≥85
Elongation L / T, %	ASTM D5147	≥200 / ≥200
Determination of shear resistance of joints, kN/m	EN 12317-1	≥2.0
Peel resistance of joints: overlap to overlap / overlap to film, N/50 mm	EN 12316-1	≥25 / -
Reinforcement type	-	no base
Protective covering type on the top	-	spunbond
Protective covering type on the bottom	-	anti-adhesion film

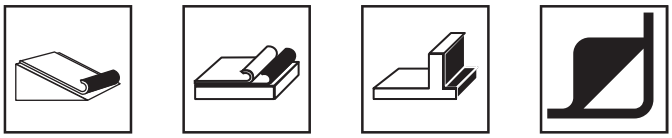
ULTRAFLEX SA

SBS MODIFIED BITUMEN SELF-ADHESIVE POLYESTER REINFORCED MEMBRANE FOR WATERPROOFING WITHOUT TORCHING

Self-adhesive polyester reinforced SBS-modified bitumen membrane ULTRAFLEX SA is designed to complete secure application. It is used as an underlay on pitched roofs and as a vapor barrier. Could also be used for waterproofing of foundations and engineering structures. Thanks to the special adhesive bitumen compound, the material can be used on surfaces, where the standard torch-on application is forbidden (expandedx/ extruded polystyrene or wooden base).

Waterproofing material ULTRAFLEX SA has the following advantages:

- additional strength granted by polyester reinforcement;
- can be used on bases, where the standard torch-on application is forbidden (wood, XPS, etc.);
- high speed of application;
- safe and cheap application – the membrane is applied without the use of gas and flame;
- no need for any additional equipment and skills;
- cold application method prevents smoke, odors and noise.



PROPERTIES	TEST METHOD	ULTRAFLEX SA 1.5 mm	ULTRAFLEX SA 2.0 mm
Thickness, mm	EN 1849-1	1.5±0.20	2.0±0.20
Mass per unit area, kg/m^2	EN 1849-1	1.8±0.20	2.3±0.20
Length x width, m	EN 1848-1	20 x 1	20 x 1
Softening point, °C	ASTM D36	≥100	≥100
Flexibility at low temperature, °C	EN 1109-1	≤-20	≤-20
Flow resistance at elevated temperature, °C	EN 1110	≥90	≥90
Elongation L / T, %	ASTM D5147	35±20 / 45±20	35±20 / 45±20
Tensile strength L / T, N/50 mm	ASTM D5147	400±100 / 300±100	400±100 / 300±100
Peel resistance of joints: overlap to overlap / overlap to film, N/50 mm	EN 12316-1	≥40 / ≥20	≥60 / ≥30
Reinforcement type	-	polyester	polyester
Protective covering type on the top	-	polymer film or sand	polymer film or sand
Protective covering type on the bottom	-	anti-adhesion film	anti-adhesion film

TECHNOELAST VB 500 SELF

SBS MODIFIED BITUMEN SELF-ADHESIVE MEMBRANE FOR PROTECTION FROM MOISTURE CAUSED BY VAPOR

TECHNOELAST VB 500 SELF self-adhesive SBS-modified bitumen membrane with aluminium foil is used as a high-performance vapor barrier in roof waterproofing systems.

The material is produced on a base of a glass net carrier coated with SBS-modified self-adhesive bitumen binder. The membrane is protected on the bottom side with an easily removable siliconized film, while the top surface is covered with aluminium foil.

Vapor barrier TECHNOELAST VB 500 SELF has the following advantages:

- provides very effective vapor insulation;
- high tensile strength offers the possibility of walking over the material during its installation;
- reliable adhesion properties prevent the material from shifting and make it invulnerable to the wind load;
- high speed of application,
- no need for any additional equipment and skills;
- high repairability.

PROPERTIES	TEST METHOD	TECHNOELAST VB 500 SELF
Mass per unit area, kg/m²	EN 1849-1	0.5±0.1
Length x width, m	EN 1848-1	50 x 1.08
Softening point, °C	ASTM D36	≥110
Flexibility at low temperature, °C	EN 1109-1	≤-25
Flow resistance at elevated temperature, °C	EN 1110	≥90
Elongation L / T, %	ASTM D5147	≥2.0 / ≥2.0
Tensile strength L / T, N/50 mm	ASTM D5147	600±120 / 600±120
Determination of shear resistance of joints, kN/m	EN 12317-1	≥1.5
Peel resistance of joints: overlap to overlap / overlap to film, N/50 mm	EN 12316-1	≥50
Reinforcement type	-	glass net
Protective covering type on the top	-	aluminium foil
Protective covering type on the bottom	-	anti-adhesion film

EASYROOFING

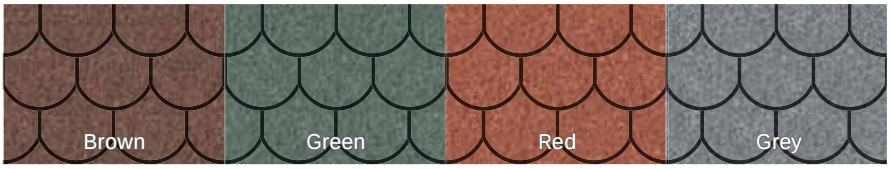
BITUMEN DECORATIVE ROOFING AND WATERPROOFING MEMBRANE

Self-adhesive rolled shingles with decorative patterns will change roof in several hours, as well as sufficiently reduce noise level during precipitations. Colored basalt granules do not fade under the influence of the sun and are not washed off by the rain providing nice aesthetic appearance and reliable protection of bitumen compound from ultraviolet for many years.
EASYROOFING membrane with different patterns and colors will not only enrich the roof with an elegant finishing touch, but it will also protect the internal premises from leakages and reduce the noise of rain.

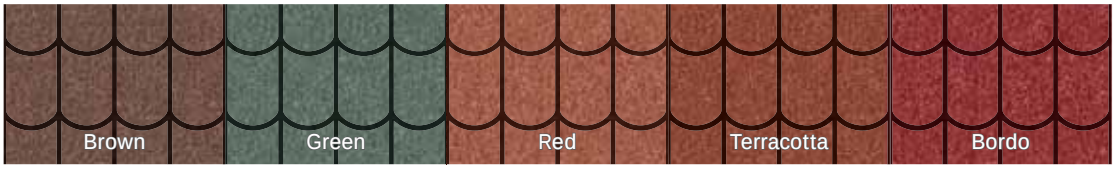
Installation does not require additional equipment or extra skills. Selfadhesive layer enables installation on inflammable decking.

COLLECTION: BRICK

COLLECTION: BEAVER TAIL



COLLECTION: TILES



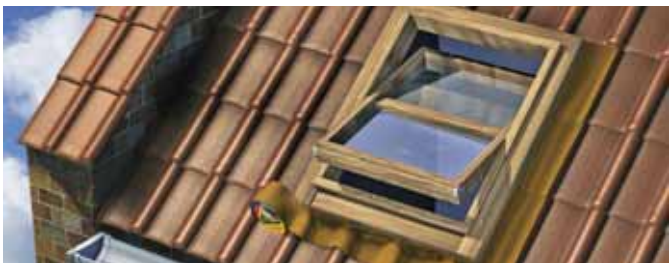
PROPERTIES	TEST METHOD	EASYROOFING
Thickness, mm	EN 1849-1	3.2±0.20
Mass per unit area, kg/m^2	EN 1849-1	4.5±0.20
Length x width, m	EN 1848-1	8 x 1
Softening point, °C	ASTM D36	-
Flexibility at low temperature, °C	EN 1109-1	≤ -15
Flow resistance at elevated temperature, °C	EN 1110	≥ 100
Elongation L / T, %	ASTM D5147	35±20 / 35±20
Tensile strength L / T, N/50 mm	ASTM D5147	650±150 / 400±150
Tear resistance L / T, N	ASTM D4073	300±100 / 300±100
Reinforcement type	-	polyester
Protective covering type on the top	-	basalt colored granules
Protective covering type on the bottom	-	anti-adhesion film

SELF-ADHESIVE SEALANT TAPE

NICOBAND

SELF-ADHESIVE SEALANT TAPE

NICOBAND sealant tape is a very convenient way to seal various cracks and joints. Can also be used to insulate junctions, for roofing repairs and for roof repair systems.



ADVANTAGES:

- Protected from UV radiation. The bitumen layer of NICOBAND sealant tape is protected from UV radiation by aluminum coating. This makes it possible to use the tape outdoor.
- Easy to use and durable. NICOBAND sealant tape is very easy to use and its application requires no special skills. The sealing function of the tape extends for its full lifetime (10 years) thanks to specially formulated polymer-bitumen binder.
- Different colors. The tape is designed for the most popular roofing colors. It allows performing repairs or maintenance in the tone of the main surface without disturbing its form.

- Flawless adhesion to many different surfaces. The self-adhesive layer provides perfect quality adhesion to many different surfaces: metal, slate, wood, plastic, plaster, concrete, glass, etc.

METHOD OF APPLICATION:

The surface must be flat, dry and clean. Cut the tape to required length, remove the protective film, stick the tape to the desired area and press it firmly. If the temperature is below +5°C it is necessary to first keep NICOBAND in room temperature for at least 12 hours before application. The use of the material at sub-zero temperatures requires additional heating of the surface. The use of NICOBAND is not recommended on hot vertical surfaces or on surfaces with a temperature above +80°C.

WIDTH, cm	5	7.5	10	15	20	30
Length: 3 m	+	+	+	+	-	-
Length: 10 m	-	+	+	+	+	+

TAPE DIMENSIONS, mm	PACKAGE SIZE, mm	QUANTITY IN PACKAGE	WEIGHT OF PACKAGE, kg
3000x50	box 240x240x320	24	5.9
3000x75	box 240x240x320	16	5.9
3000x100	box 240x240x320	12	5.9
3000x150	box 240x240x320	8	5.9
10000x75	box 180x180x320	4	5
10000x100	box 180x180x320	3	5
10000x150	box 180x180x320	2	5
10000x200	box 180x180x320	1	3.5
10000x300	box 180x180x320	1	5

PRIMERS AND MASTICS

BITUMEN PRIME COATING

SOLVENT BASED BITUMEN PRIMER

Ready to use bitumen primer BITUMEN PRIME COATING is intended for preparation (prime coating) of the surface before installation of torch-on or self-adhesive waterproofing material. The prime coating is necessary for ensuring the strong adhesion of the bitumen-based waterproofing materials to porous, rough and dusty surfaces.

The primer presents a mix of high-quality bitumen and specially selected organic solvents. It has an enhanced covering capacity, penetrability and short drying time.

Ready to use bitumen primer BITUMEN PRIME COATING is applied to a surface by large or small brush. It is applied to the base at once that grants additional convenience and enhanced performance.

The product should be stored in a dry place protected from direct sunlight at temperatures from -20°C to +30°C. Shelf life – 18 months.

PRIMER TECHNONICOL No.04

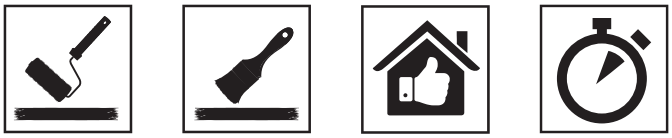
WATER BASED BITUMEN PRIMER

Ready to use bitumen primer TECHNONICOL No.04 is intended for preparation (prime coating) of the surface before installation of torch-on or self-adhesive waterproofing material. The prime coating is necessary for ensuring the strong adhesion of the bitumen-based waterproofing materials to porous, rough and dusty surfaces.

The primer is produced on the base of bitumen dispersion in water; it does not contain solvents. The primer has a neutral smell, so it is perfectly suited for indoor works.

Ready to use bitumen primer TECHNONICOL No.04 is applied to a surface by large or small brush. It is applied to the base at once that grants additional convenience and enhanced performance. Application temperature should be from +5°C to +40°C.

The product should be stored in a dry place protected from direct sunlight at a temperature above +5°C. Shelf life – 6 months.

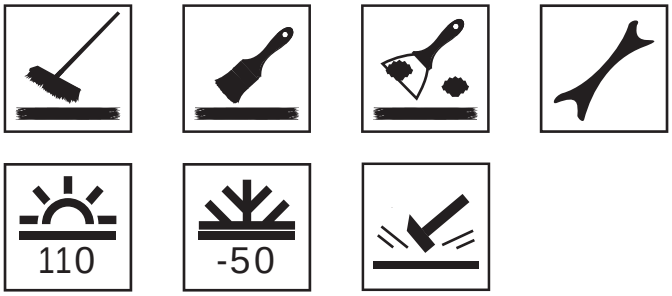


PROPERTIES	BITUMEN PRIME COATING	PRIMER TECHNONICOL No.04
Content of bitumen with emulsifier, %	-	25-40
Mass fraction of non-volatile substances, %	45-55	-
Drying time at 20°C, h	12	1
Relative viscosity, s	15-40	5-30
Softening temperature, °C	≥70	≥75
Consumption, l/m^2	0.25-0.35	0.25-0.35
Bucket volume, l	3, 10, 20	20

MASTIC TECHNONICOL No.21

SOLVENT BASED ROOFING AND WATERPROOFING POLYMER-BITUMEN MASTIC

Ready to use roofing and waterproofing bitumen mastic TECHNONICOL No.21 presents a mix of high-quality bitumen, special polymers, mineral fillers and organic solvents. Coatings on its basis are very flexible, heat and moisture resistant and have an excellent adhesion with the base. After drying, it forms a high-strength waterproofing layer that considerably increases the service life of protected structures. The mastic can be used within a wide range of operating temperatures thanks to added polymers.



Mastic TECHNONICOL No.21 is used for:

- installation of mastic roofs and repair of old roofs;
- waterproofing of underground structures (foundations, basements, piles, etc.);
- waterproofing and anti-corrosion treatment of metal surfaces, including car bodies.

The mastic is applied to a surface layer by layer by brush or spatula. A layer can be also installed by pouring and leveling. The thickness of one layer should not exceed 1.5 mm. Every following layer is applied after the previous one becomes dry. Application of at least 2 mastic layers is recommended for reliable waterproofing of underground structures, 3 layers are recommended for installation of mastic roofs. Drying time under standard conditions is not more than 24 hours.

The product should be stored in a dry place protected from direct sunlight at temperatures from -20°C to +30°C. Shelf life – 18 months.

PROPERTIES	MASTIC TECHNONICOL No.21
Adhesion strength with concrete, MPa	≥0.6
Adhesion strength with metal, MPa	≥0.9
Strength of adhesion between bitumen membrane - bitumen membrane, MPa	≥0.3
Strength of adhesion between bitumen membrane - concrete, MPa	≥0.4
Shear strength of adhesive bond, kN/m	≥4.0
Nominal strength, MPa	≥1.0
Elongation at break, %	≥500
Mass fraction of non-volatile substances, %	≥50
Heat endurance, °C	≥110
Flexibility on R=5.0±0.2 mm beam at -35°C	no cracks
Water absorption over the course of 24 h, %	≤0.4
Watertightness during 24 h at a pressure of 0.1 MPa	Pass
Consumption for installation of 1 layer, kg/m^2	1.2–1.9
Bucket volume, kg	3, 10, 20

MASTIC TECHNONICOL No.24

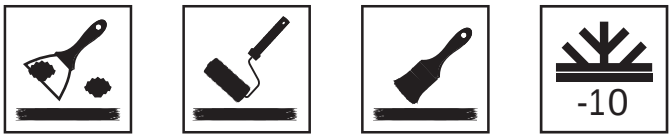
SOLVENT BASED WATERPROOFING BITUMEN MASTIC

Ready to use waterproofing bitumen mastic TECHNONICOL No.24 presents a mix of high-quality bitumen, mineral fillers, special additives and organic solvents.

Mastic TECHNONICOL No.24 is used for waterproofing of concrete or wood surfaces of underground structures (foundations, basements, piles, etc.).

The mastic is applied to a surface layer by layer by brush or spatula. A layer can be also installed by pouring and leveling. Every following layer is applied after the previous one becomes dry. Application of at least 2 mastic layers is recommended for reliable waterproofing. Drying time under standard conditions is not more than 24 hours.

The product should be stored in a dry place protected from direct sunlight at temperatures from -20°C to +30°C. Shelf life – 18 months.

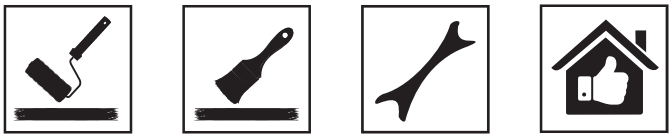


PROPERTIES	MASTIC TECHNONICOL No.24
Adhesion strength with concrete, MPa	≥0.1
Adhesion strength with metal, MPa	≥0.1
Shear strength of adhesive bond, kN/m	≥2.0
Mass fraction of non-volatile substances, %	≥65
Heat endurance, °C	≥80
Flexibility on R=5.0±0.2 mm beam at -5°C	no cracks
Water absorption over the course of 24 h, %	≤0.4
Watertightness during 10 min at a pressure of 0.03 MPa	Pass
Consumption for installation of 1 layer, kg/m^2	1.0
Bucket volume, kg	3, 10, 20

MASTIC TECHNONICOL No.31

WATER BASED ROOFING AND WATERPROOFING POLYMER-BITUMEN MASTIC

Ready to use roofing and waterproofing bitumen mastic TECHNONICOL No.31 presents a mix of an aqueous emulsion of bitumen, special polymers, additives and mineral fillers. It has an enhanced elasticity, heat endurance and water-resistant properties. The mastic has a neutral smell, so it is perfectly suited for indoor works.



Mastic TECHNONICOL No.31 is used for:

- indoor waterproofing (bathrooms, pools, balconies, etc.);
- installation of mastic roofs and repair of old roofs;
- waterproofing of underground structures (basements, piles, etc.).

The mastic is applied to a surface layer by layer by roller or brush. A layer can be also installed by pouring and leveling. The thickness of one layer should not exceed 1.5 mm. Every following layer is applied after the previous one becomes dry. Application of at least 2 mastic layers is recommended for reliable waterproofing of underground structures, 3 layers are recommended for installation of mastic roofs.

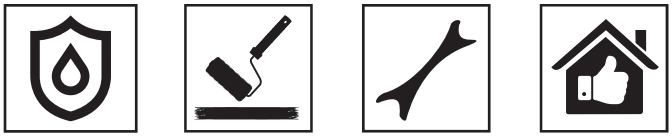
The product should be stored in a dry place protected from direct sunlight at a temperature above +5°C. Shelf life – 6 months.

PROPERTIES	MASTIC TECHNONICOL No.31
Adhesion strength with concrete, MPa	≥0.45
Nominal strength, MPa	≥0.5
Elongation at break, %	≥700
Content of bitumen binder with emulsifier, %	50-70
Heat endurance, °C	≥95
Flexibility on R=5.0±0.2 mm beam at -15°C	no cracks
Water absorption over the course of 24 h, %	≤1.0
Watertightness during 24 h at a pressure of 0.1 MPa	Pass
Consumption for installation of 1 layer, kg/m^2	1.2-1.9
Bucket volume, kg	3, 10, 20

MASTIC TECHNONICOL No.33

SPRAY APPLIED WATER BASED POLYMER-BITUMEN MASTIC

Spray applied roofing and waterproofing bitumen mastic TECHNONICOL No.33 presents a mix of an aqueous emulsion of bitumen, special polymers and latex additives. It has an outstanding elasticity, heat endurance and strength properties. The mastic has a neutral smell, so it is perfectly suited for indoor works. Spray application of the mastic can significantly reduce the time needed for installation of waterproofing layer.



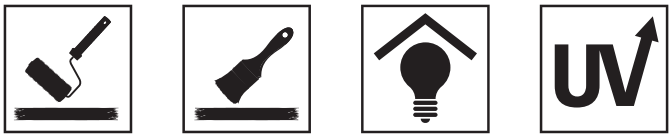
Mastic TECHNONICOL No.33 is used for:
- indoor waterproofing (bathrooms, pools, balconies, etc.);
- installation of mastic roofs;
- waterproofing of underground structures (basements, piles, etc.).

The mastic is spray applied to a surface together with coagulant solution (supplied with the product) by a dual-channel airless spraying device.

MASTIC TECHNONICOL No.57

SOLVENT BASED REFLECTIVE POLYMER-BITUMEN MASTIC

Ready to use reflective bitumen mastic TECHNONICOL No.57 presents a mix of high-quality bitumen, special polymers, aluminum pigment, additives and organic solvents. Coating layer formed by the mastic effectively protects the bitumen roofing against UV rays and heat; it also protects the metal roof from corrosion.



Mastic TECHNONICOL No.57 is used for:
- installation of the protective layer on new mastic roofs;
- recovery of the protective layer on old roofs;
- corrosion protection of roof coverings.

The mastic is applied to a surface by brush, roller or airless spraying device. Application of 2 mastic layers is recommended.

PROPERTIES	MASTIC TECHNONICOL No.33	MASTIC TECHNONICOL No.57
Adhesion strength with concrete, MPa	≥0.6	≥0.3
Nominal strength, MPa	≥0.7	≥0.2
Elongation at break, %	≥900	≥200
Mass fraction of non-volatile substances, %	53-65	≥50
Heat endurance, °C	≥140	≥100
Flexibility on R=5.0±0.2 mm beam at -15°C	no cracks	no cracks
Water absorption over the course of 24 h, %	≤0.4	≤2.0
Watertightness during 24 h at indicated pressure	0.1 MPa, pass	0.001 MPa, pass
Consumption for installation, kg/m^2	1.5 for 1 mm	0.4-0.6 for 1 layer
Bucket volume, kg	200	3, 10, 20

STONE WOOL

Stone wool is a highly effective insulating material. By thermal efficiency, it is ready to compete with the reference insulator – air in a stationary state. High resistance to thermal transfer is achieved by retaining a large amount of air in a stationary state within the insulation thanks to the use of closely intertwined finest fibers of mineral wool. Thermal insulation based on stone wool by TECHNONICOL Corporation has a number of technical and performance advantages created during the production stage.

ABOUT THE MATERIAL

Stone wool is made from gabbro-basaltic stones with the addition of sedimentary of low acidity. Supplements are necessary to provide the desired plug-acidity, melting point and to obtain a melt with the desired flow characteristics.

Technological processes are automated and strict quality control is implemented at all stages of the production — from raw materials to finished product testing. That ensures the stability of product properties.

Ready-to-use slabs of stone wool are safely packaged into a shrink film. A pallet of stone wool is wrapped using stretch-hood technology, which reduces transportation and labour costs because of higher handling speed. This type of packaging protects the material from damage when it is stored on the ground or on a construction site, so the stone wool does not lose its' physical and mechanical properties in such storage conditions.

PRODUCTION QUALITY

All our materials are produced from basalt rocks on advanced high tech equipment of leading European manufacturers.

The quality management system of TECHNONICOL stone wool production is certified according to ISO 9001:2000. Implementation of this certification ensures effective company management in general as well as the output of products with stable qualitative characteristics to meet requirements of international markets and customer expectations.

The system of ecological management at all stone wool producing plants is certified according to ISO 14001:2004 issued by a German certifying organisation Deutsche Akkreditierungsstelle GmbH. This certificate confirms that the used manufacturing process complies with the highest international requirements of environmental regulations. Control of this process guarantees the reduction of negative impacts on the environment as well as waste reclamation and disposal, which, in turn, improves our environmental performance. Long experience, modern equipment, continuous technology perfection and innovations made by the proprietary Research Center allow TECHNONICOL to manufacture stone wool products of stable premium quality.

MATERIALS RANGE

The use of thermal insulation materials is an obligatory stage of many construction and repair processes.

A wide range of TECHNONICOL stone wool products is divided by area of application and allows the use of products in both civil and private housebuilding.

Product range includes insulation for plaster and ventilated facades, pitched and flat roofs, floors, walls, sandwich panels, etc.

- Standard slabs of stone wool are used for thermal and acoustic insulation in most application areas.

- Slabs with grooves are used for thermal insulation of flat roofs with the formed system of ventilated channels.

- Slabs with a rough surface are used to increase the adhesion of the protective layer of plaster in thermal insulation of facades.

- Slope shaped slabs are used to create the slope of 1.7 or 4.2% on flat roofs in order to drain water on the roof to funnels.

ADVANTAGES

EFFECTIVE THERMAL INSULATION
TECHNONICOL stone wool is a highly effective thermal insulation material. High resistance to thermal transmission is achieved because of finest intertwined mineral wool fibers, which retain a large amount of air inside the material.

FIRE SAFETY
Gabbro-basalt rocks are the main raw material of stone wool products. Thanks to this, all TECHNONICOL stone wool products are non-flammable. The fiber melting temperature exceeds 1000°C that makes it possible to use the stone wool products in a wide range of working temperatures.

POWERFUL SOUND ABSORPTION
The fibrous structure of stone wool products secures excellent acoustic and sound-absorbing properties. TECHNONICOL products have high sound-absorbing ratios in the broad range of frequencies, which decreases the level of airborne and impact noise in various sound-insulating structures: partitions, floors, walls and others.

BIOSTABILITY
TECHNONICOL stone wool products fully meet the biological stability criteria, which was proved with numerous tests and trials as well as with the field data. Stone wool can offset the effect of various macro- and microorganisms: the material does not provide conditions for the vital activity of bacteria, mold, fungi, and is not attractive as an environment for insects and rodents.

DIMENSIONAL STABILITY
Increased mechanical stress resistance of TECHNONICOL stone wool is ensured by fiber properties and stone wool structure. These parameters are set individually for each type of material, depending on the area of application of the thermal insulation.

VAPOR PERMEABILITY
Vapor permeability of TECHNONICOL stone wool is high, materials do not retain the moisture coming from premises in the form of vapor created by human activities. Thermal insulation remains dry practically always.

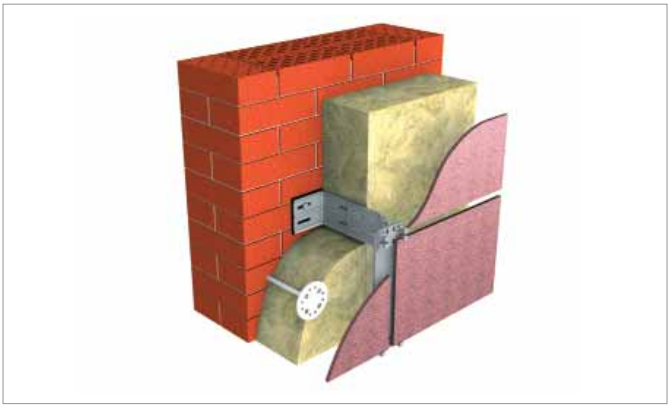
WATER REPELLENCY
All TECHNONICOL stone wool is treated with water-repelling agents. The presence of moisture in the insulation affects its properties, the term of service and indoor climate. Usually, if a thermal insulation gets damp, it needs to be replaced. Our stone wool is effectively protected against moisture.

CHEMICAL RESISTANCE
TECHNONICOL stone wool is manufactured from basalt stone. Natural minerals of this group are notable for their high chemical resistance to various substances: oils, solvents, paints, acidic and alkaline. Stone wool can be safely used together with any types of construction materials as well as corrosive filters in many branches of chemical industry.

ECOLOGICAL COMPATIBILITY
Being one of the major European mineral wool producers, TECHNONICOL constantly improves its products and services by using modern equipment and implementing eco-friendly technologies. All products comply with environmental standards, they are safe for human health and nature. That is granted by the complete cycle of certification, both obligatory and optional.

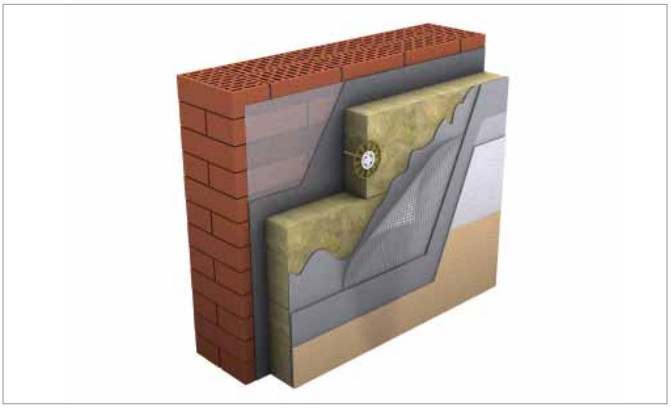
TECHNOVENT STANDARD

TECHNOVENT is a nonflammable, water-repellent thermal and sound insulation slabs of mineral wool based on basalt rocks. It is used in industrial and civil construction as a thermal and sound insulating layer in ventilated facade systems (one-layer insulation).



TECHNOFACADE

TECHNOFACADE is a nonflammable, water-repellent thermal and sound insulation slabs of mineral wool based on basalt rocks. It is used in civil and industrial construction as thermal and sound insulation in systems for the external insulation of walls with a protective decorative layer made of thin plaster coating.

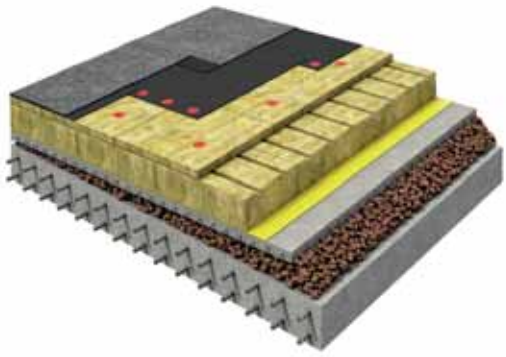


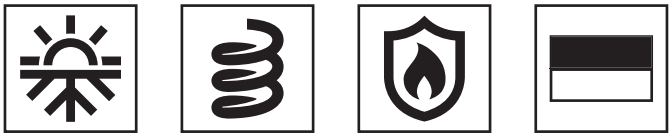
PROPERTIES	TEST METHOD	TECHNOVENT STANDARD	TECHNOFACADE
Thermal conductivity λ_D at 10°C, W/m*K	EN 12667	0.035	50-90 mm – 0.038 100-200 mm – 0.037
Tensile strength, kPa	EN 1607	5.0	15.0
Point load, N	EN 12430	100	400
Short term water absorption, kg/m^2	EN 1609	≤1.0	≤1.0
Long term water absorption, kg/m^2	EN 12087	≤3.0	≤3.0
Water vapor transmission, MU	EN 12086	MU1	MU1
Reaction to fire, Euroclass	EN 13501-1	A1	A1
Compressive stress at 10% deformation, kPa	EN 826	10	40
Density, kg/m^3	-	80±8	145±14
Length, mm	EN 823	1000, 1200	1000, 1200
Width, mm	EN 823	500, 600	500, 600
Thickness (increments 10 mm), mm	EN 823	50-200	50-200

THERMAL RESISTANCE R_D, m^2*K/W (EN 12667)									
THICKNESS, mm	30	40	50	60	70	80	90	100	110
TECHNOVENT STANDARD	-	-	1.40	1.70	1.95	2.25	2.55	2.80	3.10
TECHNOFACADE	-	-	1.30	1.55	1.80	2.15	2.45	2.70	2.95
TECHNOROOF V60	0.75	1.00	1.30	1.55	1.80	2.05	2.35	2.60	-
TECHNOROOF N30	-	-	1.35	1.60	1.90	2.15	2.45	2.70	2.95

TECHNOROOF V60

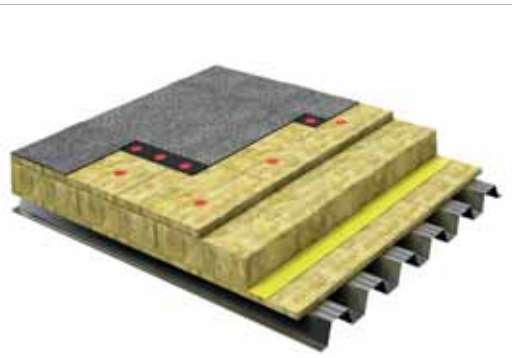
TECHNOROOF V60 is a nonflammable water-repellent thermal and sound insulation slabs of mineral wool based on basalt rocks. It is used as a top thermal insulation layer on flat roofs in new constructions or reconstructions of industrial and civil buildings and structures.





TECHNOROOF N30

TECHNOROOF N30 is a nonflammable water-repellent thermal and sound insulation slabs of mineral wool based on basalt rocks. It is used as a bottom thermal insulation layer on flat roofs in new constructions or reconstructions of industrial and civil buildings and structures.



PROPERTIES	TEST METHOD	TECHNOROOF V60	TECHNOROOF N30
Thermal conductivity λ_D at 10°C, W/m*K	EN 12667	0.038	0.036
Tensile strength, kPa	EN 1607	15.0	7.5
Point load, N	EN 12430	700	250
Short term water absorption, kg/m^2	EN 1609	≤1.0	≤1.0
Long term water absorption, kg/m^2	EN 12087	≤3.0	≤3.0
Water vapor transmission, MU	EN 12086	MU1	MU1
Reaction to fire, Euroclass	EN 13501-1	A1	A1
Compressive stress at 10% deformation, kPa	EN 826	60	30
Density, kg/m^3	-	180±15	110±10
Length, mm	EN 823	1200, 2400	1200, 2400
Width, mm	EN 823	600, 1200	600, 1200
Thickness (increments 10 mm), mm	EN 823	30-100	50-200

THERMAL RESISTANCE R_D, m^2*K/W (EN 12667)									
THICKNESS, mm	120	130	140	150	160	170	180	190	200
TECHNOVENT STANDARD	3.40	3.70	3.95	4.25	4.50	4.80	5.10	5.40	5.70
TECHNOFACADE	3.25	3.55	3.85	4.15	4.45	4.70	4.95	5.20	5.45
TECHNOROOF V60	-	-	-	-	-	-	-	-	-
TECHNOROOF N30	3.25	3.60	3.85	4.00	4.40	4.70	4.90	5.20	5.45

REFERENCES

Rezekne, Latvia
GORS, THE EMBASSY OF LATGALE

Naples, Italy
MCARTURGLEN, LA REGGIA DESIGNER OUTLET

Karjat, India
RADISSON BLU RESORT & SPA KARJAT

EXTRUDED POLYSTYRENE

Extruded polystyrene (XPS) is one of the most efficient thermal insulation materials, which is widely used for thermal insulation of foundations, roofs, floors, pipelines, roads and railways. TECHNONICOL company specialists have developed a unique technology for producing extruded polystyrene slabs with nanoscale carbon particles. That allowed to significantly increase the thermal efficiency of the material and its' strength characteristics while decreasing the coefficient of water absorption to the minimum.

ABOUT THE MATERIAL

Extruded polystyrene slabs are produced by mixing polystyrene beads at an elevated temperature and pressure with the addition of blowing agent and subsequently extruding from the extruder. TECHNONICOL XPS has outstanding thermal insulation parameters and high compressive strength, does not absorb water, does not shrink or swell and is chemically resistant.

TECHNONICOL extruded polystyrene has an excellent energy-saving performance due to improved physical and mechanical properties. It offers a number of valuable advantages: low thermal conductivity, high strength, biological resistance, ecological compatibility and durability of use for more than 40 years.

We strive to make the perfect product – the most reliable, convenient to operate and profitable in all aspects.

PRODUCTION QUALITY

Extruded polystyrene TECHNONICOL CARBON is produced on modern high-tech equipment and only the top quality raw materials obtained from reliable suppliers are used for the production.

Each production line of the company is equipped with a computer control system. Advanced laboratories are operating in every factory, carrying out a continuous multistage quality control of produced products.

All products of TECHNONICOL meet sanitary requirements; this applies to the manufacturing, storage, transportation and sales. XPS TECHNONICOL CARBON ECO has passed voluntary certification “Leaf of Life”, which confirms the safety in housing construction.

Extruded polystyrene products by TECHNONICOL Corporation present a mix of competitive price, uncompromising quality and numerous operational advantages to meet any needs of thermal insulation.

MATERIALS RANGE

The use of thermal insulation materials is an obligatory stage of many construction and repair processes.

A wide range of TECHNONICOL XPS products is divided by area of application and allows the use of products in both civil and private housebuilding. Product range includes insulation for plaster and ventilated facades, pitched and flat roofs, floors, walls, etc. On the vertical surfaces the material is fixed by means of special mechanical fasteners or adhesive mastic.

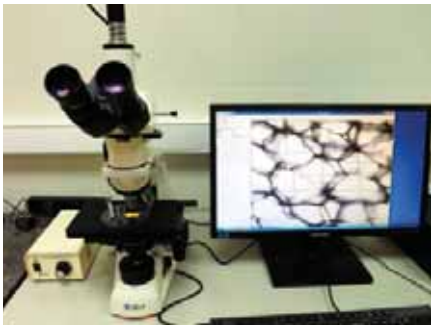
High strength properties of extruded polystyrene allow using the product for the construction of ballasted roofs. XPS with proper fixation can be used as the protective layer for waterproofing membranes. It is also used in the construction of railways and highways.

- Standard slabs of extruded polystyrene are used for thermal insulation in most application areas.

- Slabs with grooves are used for construction of wall drainage and additional thermal insulation of the foundation.

- Slabs with a rough surface are used to increase the adhesion of the facade plaster.

- Slope shaped slabs are used to create the slope on flat roofs in order to drain water on the roof to funnels.



ADVANTAGES

EFFECTIVE THERMAL INSULATION
TECHNONICOL extruded polystyrene has uniformly distributed closed-cell structure. It provides high thermal insulation, physical and mechanical properties.

HIGH STRENGTH
The strength of extruded polystyrene TECHNONICOL CARBON is in range of 25-50 t/m^2 that fully complies with the stringent requirements for thermal insulation materials.

DURABILITY
Extruded polystyrene TECHNONICOL CARBON has a durability of at least 40 years.

GOOD FOR ANY CLIMATE
XPS TECHNONICOL CARBON can be used in a wide temperature range from -70°C to +75°C, it is suitable for application in all climatic areas of the world.

MINIMAL WATER ABSORPTION
The material has the minimal water absorption characteristics, its insulating properties remain stable throughout the whole life cycle.

OPTIMAL DENSITY
Specialists of the company were able to find the optimal density for XPS products (the main factor affecting the cost of production). That allowed reducing the price, while improving the key performance parameters of extruded polystyrene, constantly increasing production capacity, continuously improving technology and processes.

CONSISTENT DIMENSIONS
The accuracy of geometric dimensions of TECHNONICOL extruded polystyrene slabs can improve the speed of installation and the quality of work.

EASY INSTALLATION
Slabs of extruded polystyrene are easily cut, quickly and securely installed using adhesives or mechanical fasteners.

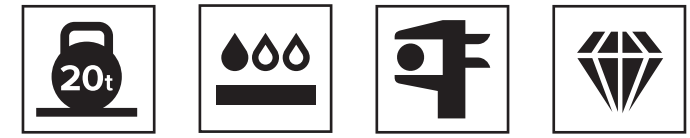
RESISTANT TO RODENTS
Extruded polystyrene TECHNONICOL CARBON is not a breeding ground for rodents.

BIOSTABILITY
Extruded polystyrene TECHNONICOL CARBON is biological stable to molds - the main destructor of insulating materials.

CHEMICAL RESISTANCE
All TECHNONICOL materials are subject to strict sanitary and epidemiological control to obtain the corresponding conclusions. XPS TECHNONICOL CARBON is chemically resistant and is not a subject to putrefaction.

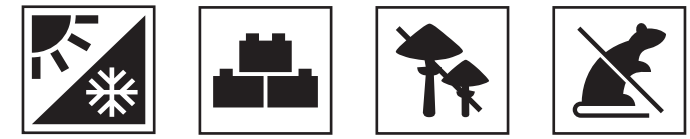
TECHNONICOL CARBON PROF

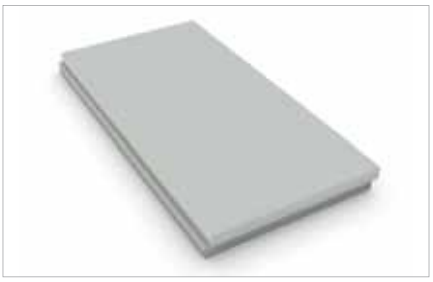
Extruded polystyrene TECHNONICOL CARBON PROF is a high-performance material with increased compressive stress parameter that is widely used in buildings and constructions while arranging the thermal insulation of basements, roofs, floors and facades. Also used in the construction of railways and highways.



TECHNONICOL CARBON ECO

Extruded polystyrene TECHNONICOL CARBON ECO is a high-performance material widely used in buildings and constructions while arranging the thermal insulation of basements, roofs, floors and facades. High resistibility allows receiving an equal and simultaneously rigid base.





PROPERTIES	TEST METHOD	TECHNONICOL CARBON PROF	TECHNONICOL CARBON ECO
Thermal conductivity λ_D, W/m*K	ASTM C177	0.029-0.034	0.034
Compressive stress at 10% deformation, kPa	ASTM D1621 (EN 826)	≥300	≥200
Long term water absorption by immersion, %	ASTM C272 (EN 12087)	≤0.2	≤0.2
Reaction to fire - ignitability, Euroclass	EN ISO 11925-2	F	F
Density, kg/m^3	ASTM D1622 (EN 1602)	30-35	28-32
Length, mm	EN 822	1180-4000 (±15)	1180-4000 (±15)
Width, mm	EN 822	580-650 (±8)	580-650 (±8)
Thickness (increments 10 mm), mm	EN 823	50-100 (±3)	20-40 (±2)

THERMAL RESISTANCE R_D, m^2*K/W (ASTM C177)								
THICKNESS, mm	20	30	40	50	60	70	80	100
TECHNONICOL CARBON PROF	-	-	-	1.724	1.765	2.059	2.353	2.941
TECHNONICOL CARBON ECO	0.558	0.882	1.176	-	-	-	-	-

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