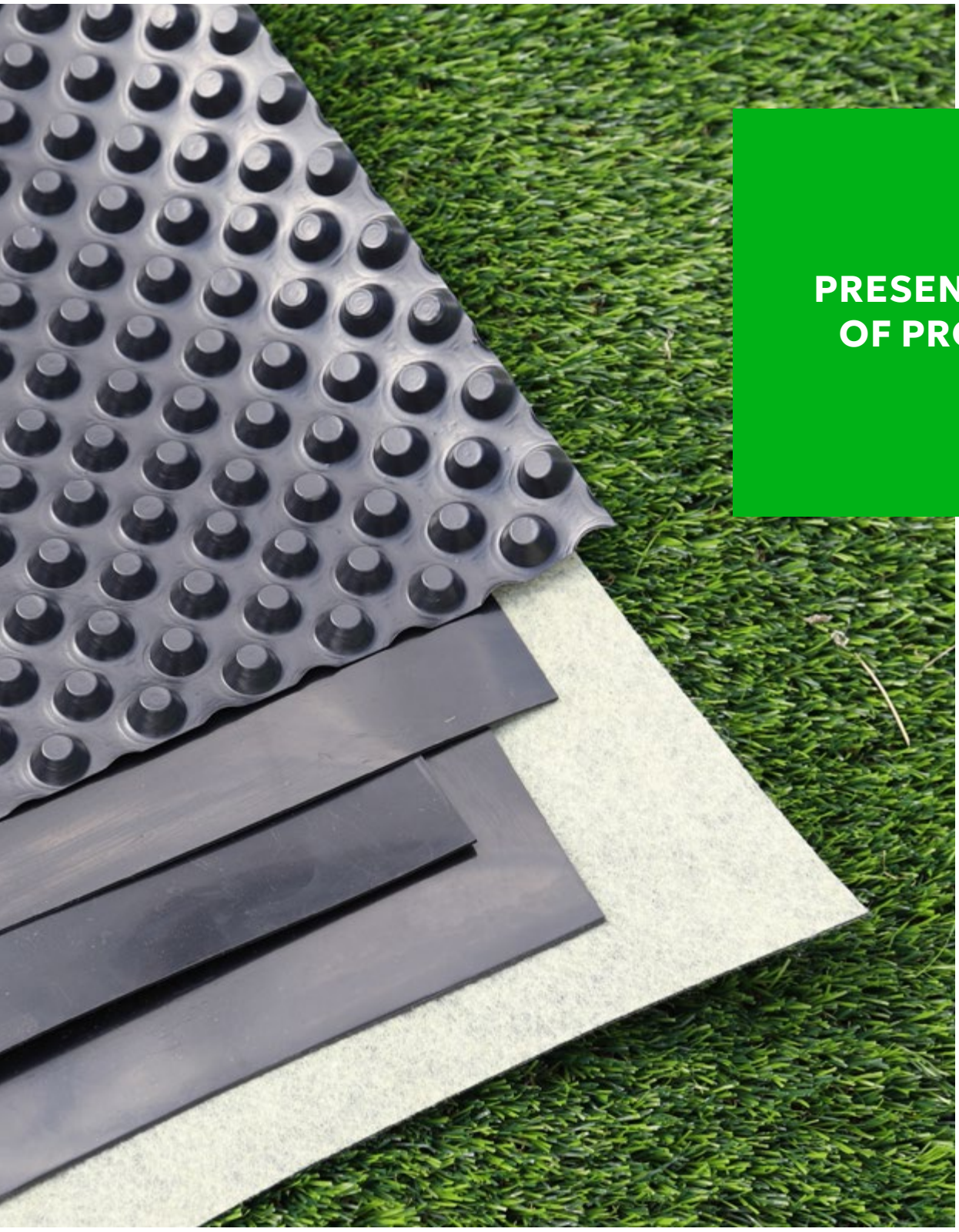
GEOSM geosynthetics | GEOFLAX



PRESENTATION OF PRODUCTS

+7 (499) 322-14-98

GEO-SM.COM

CONTENTS

ABOUT THE COMPANY

GeoSM Group has been manufacturing and supplying geosynthetic and insulating materials since 2012.

We have come a long way from a small trading company to one of the leaders in the geosynthetic materials market.

Constantly improving and discovering new directions, In the shortest time, the company became one of the largest manufacturers of geosynthetics and gained the trust of more than 7 500 clients - leaders in the construction industry and comprehensive development of Russia and countries of the near abroad.

The production of geosynthetics in our company takes place on modern high-performance equipment, which allows us to manufacture materials that meet domestic and world standards.

All our products are certified, regularly undergo mandatory quality control and has been awarded several times in industry competitions and awards.

7 500
Customers

20+
Representative offices

12 000
Shipments per year

7 000 m²
Production complexes

20 000 m²
Warehouses

24 000 t
Products per year

GEOFLAX
geosynthetic material

2030
PLAN
Top-1 in the market of geosynthetic materials.

2022
ANNIVERSARY
The company was the winner of the regional competition "100 best products of Russia", awarded by the Ministry of Construction and the Ministry of Industry and Trade of the Nizhny Novgorod region.

2019
NEW PRODUCTION AND WAREHOUSE COMPLEX
Acquisition of a production and storage complex in Ilyinogorsk (Nizhny Novgorod Region) and the first line for the production of geotextiles.

2016-2017
INCREASE IN VOLUME
The company expanded to 250 people, more than 900 product shipments were made, the total number of clients exceeded 2,500.

2013
EXPANSION OF THE ASSORTMENT
Beginning of registration of our own trademark Geoflax, expansion of the assortment due to the organization of contract production.

2023-2024
QUALITY AND QUANTITY OF
New production lines for geomembrane and geogrid are launched. The company has obtained the ISO 9001:2015 quality management certificate.

2020-2021
RAPID DEVELOPMENT
The production and warehouse complex has been completely renovated and is ready for operation. Another geotextile production line has been put into operation, and anchor production has been established.

2018
ENTERING THE INTERNATIONAL LEVEL
Start of sales of products under the TM "Geoflax" in near-overseas countries, participation in a number of specialized exhibitions, congresses and round tables in Russia and abroad.

2014-2015
GEOGRAPHICAL EXPANSION
Opening of new representative offices and temporary storage warehouses in more than 10 cities in Russia.

2012
THE BEGINNING OF THE JOURNEY
A Group of companies was created, which received the united name GeoSM.

ACHIEVEMENTS

Received the ISO 9001:2015 quality management certificate

Participant of the "Made in Russia" program

Member of the Chamber of Commerce and Industry of the Russian Federation

We are in the register of Russian industrial products of the Ministry of Industry and Trade of Russia

We cooperate with the Russian Export Center

Diploma winner of the federal competition "100 Best Goods of Russia"

Member of the Association of Industrial and Transport Enterprises "Aspromtrans"

We are in the register of enterprises of the Russian road complex

We are in the register of recognized products Avtodor-Engineering

Participant of the national project "Labor productivity Improvement"

Laureate of the "Nizhny Novgorod Quality Mark" competition

We cooperate with the Nizhny Novgorod Region Development Corporation

DOCUMENTATION

Quality Management systems certification body
of LLC "NIC KD"
office 804, 213a, Moscow highway, Nizhny Novgorod city, 603950, Russian Federation,
phone/fax +7 (831) 215-89-88, E-mail: info@nickd.ru
Certificate of accreditation № RA.RU.13АБ57
Federal Accreditation Service of the Russian Federation

№ 00156

CERTIFICATE OF CONFORMITY

Issue 1. QMS certified since October 2024

is given to GeoSM Limited liability company
(GeoSM LLC)

Legal address: office 101A, house 9, Nesterova street, Nizhny Novgorod city, 603000, Russian Federation

Manufacturing site address: house 7A, Promyshlennaya street, Ilyinogorsk working village, Volodarsky district, Nizhny Novgorod region, 606058, Russian Federation

THIS CERTIFICATE CERTIFIES THAT:

Quality Management system as applied to development, production and supply of geosynthetic materials,

performed by GeoSM LLC as a part of group of companies:

GeoSM LLC - the head company,

PlastikStroy LLC and NnovGeosinteks LLC

COMPLIES WITH THE REQUIREMENTS OF
GOST R ISO 9001-2015 (ISO 9001:2015)

the application is an integral part of this certificate

Registration № РОСС RU.АБ57.К00297

Date of registration 2024, October, 10 It is valid until 2027, October, 10

Deputy head of Quality Management Systems Certification Body E.V. Sholkin

М.П.

Audit Team leader A.K. Fedorov

Certificate of Conformity GOST R ISO 9001-2015 (ISO 9001:2015)

ВСЕРОССИЙСКИЙ КОНКУРС ПРОГРАММЫ
«100 ЛУЧШИХ ТОВАРОВ РОССИИ»

ДИПЛОМАНТ

Полотно геотекстильное нетканое
иглопробивное
и термокаландированное (дорнит)
марки «Geoflax»

Общество с ограниченной
ответственностью «ГеоСМ»

Нижегородская область

Диплом № 2024520102901

Первый вице-президент
МОО «Академия проблем качества
им. В.В. Бойцова»,
Заместитель председателя
Совета по качеству при Росстандарте Б.В. Бойцов

Москва

Diploma "100 Best Products of Russia"

CERTIFICATES OF CONFORMITY OF MATERIALS

СЕРТИФИКАТ СООТВЕТСТВИЯ

Geotextile Geoflax

СЕРТИФИКАТ СООТВЕТСТВИЯ

Geomembrane Geoflax

СЕРТИФИКАТ СООТВЕТСТВИЯ

Geocell Geoflax

СЕРТИФИКАТ СООТВЕТСТВИЯ

Geogrid Geoflax


GEOFLAX
geosynthetic material

GEOTEXTILE POLYESTER GEOFLAX

Geotextile Geoflax is a roll non-woven geosynthetic material with sufficient strength to cope with high loads without ruptures and deformations. Used for layer separation and reinforcement in road, drainage, agricultural, soil and garden work.

Parameters	100	150	200	250	300	350	400	450	500	550	600
Raw material	polyester										
Surface density, g/m2	100	150	200	250	300	350	400	450	500	550	600
Breaking load, kN/m – lenghtwise – crosswise	2,8 2,8	4,0 4,0	6,0 6,0	7,0 7,0	9,0 9,0	12,0 12,0	14,0 14,0	15,0 15,0	16,0 16,0	18,0 18,0	20,0 20,0
Elongation at break, % – lenghtwise – crosswise	50 80										
The filtration coefficient in direction perpendicular to the web plane, at a load of 2 kPa, m/day, at least	90	90	85	85	80	80	75	75	70	70	70
Thickness at pressure of 2 kPa, mm,	0,95	1,5	1,7	2,2	2,8	3,3	3,7	4,0	4,4	4,8	5,2
Roll width, m	1 – 6										
Roll length, m	50 – 100										

Function:

- Foundation reinforcement
- Separation of layers
- Filtration and drainage
- Protection of membranes
- Erosion protection
- Pipe wrapping

Application areas:

- Road construction
- Civil engineering
- Industrial construction
- Agriculture
- Railway construction
- Landfill for solid waste disposal, landfill for solid municipal waste


GEOFLAX
geosynthetic material

GEOTEXTILE POLYPROPYLENE GEOFLAX

Polypropylene geotextile (PP) is a roll geosynthetic material made from primary polypropylene, which has increased strength, excellent filtering capacity and resistance to chemical influences. It is used to separate soil layers, reinforce, drain and protect against erosion at sites where reinforcement of the structure is required: during the construction of roads with high loads, strengthening of slopes and inclines, as well as in hydraulic structures.

Parameters	100	150	200	250	300	350	400	450	500	550	600
Raw material	polypropylene										
Surface density, g/m2	100	150	200	250	300	350	400	450	500	550	600
Breaking load, kN/m – lenghtwise – crosswise	5,0 5,0	9,0 9,5	11,0 13,0	14,0 15,0	16,0 17,0	18,0 19,0	19,5 20,0	23,0 24,0	25,0 26,0	27,0 28,0	30,0 31,0
Elongation at break, % – lenghtwise – crosswise	100 100										
The filtration coefficient in direction perpendicular to the web plane, at a load of 2 kPa, m/day, at least	60	60	55	55	50	50	45	45	40	40	40
Thickness at pressure of 2 kPa, mm,	0,8	1,0	1,2	1,4	1,6	1,8	2,0	2,1	2,3	2,5	2,7
Roll width, m	1 – 6										
Roll length, m	50 – 100										

Function:

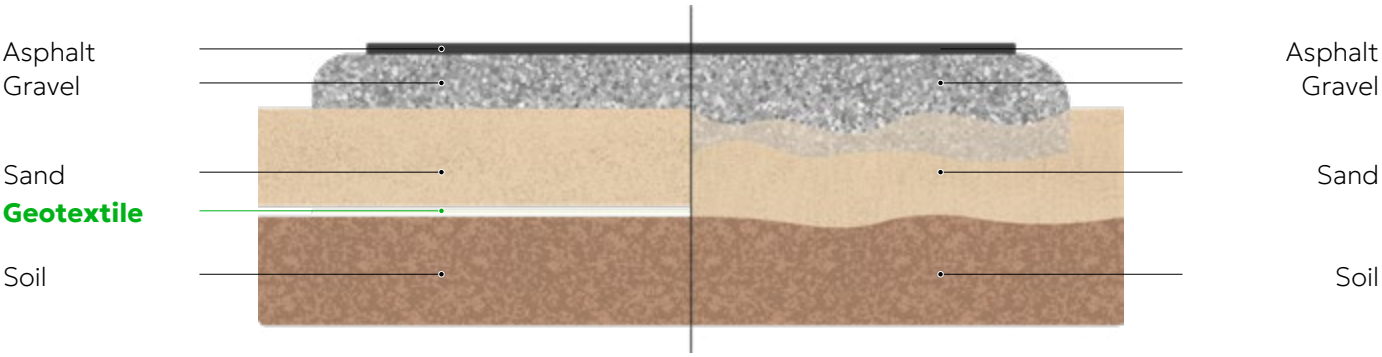
- Foundation reinforcement
- Separation of layers
- Filtration and drainage
- Protection of membranes
- Erosion protection
- Pipe wrapping

Application areas:

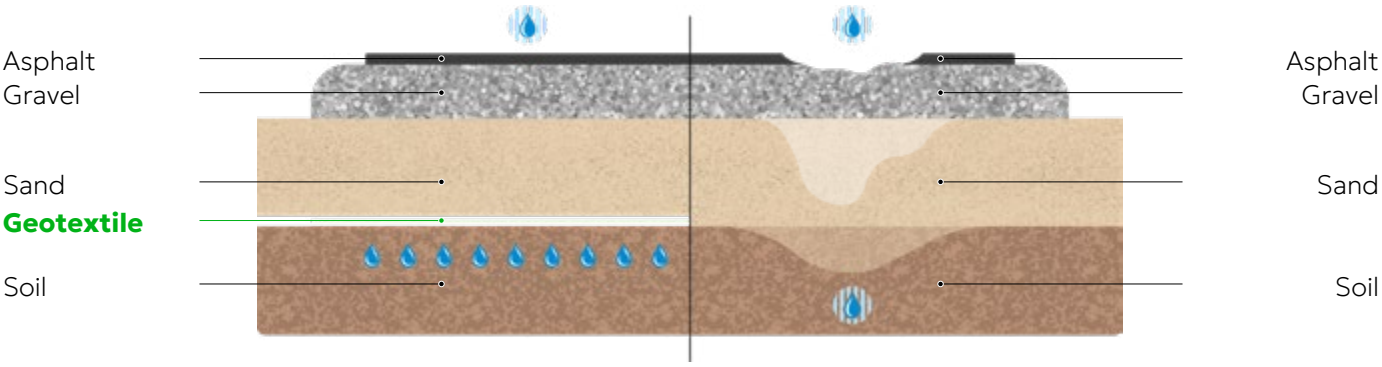
- Road construction
- Civil engineering
- Industrial construction
- Agriculture
- Railway construction
- Landfill for solid waste disposal, landfill for solid municipal waste

RATIONALE FOR USE
GEOTEXTILE

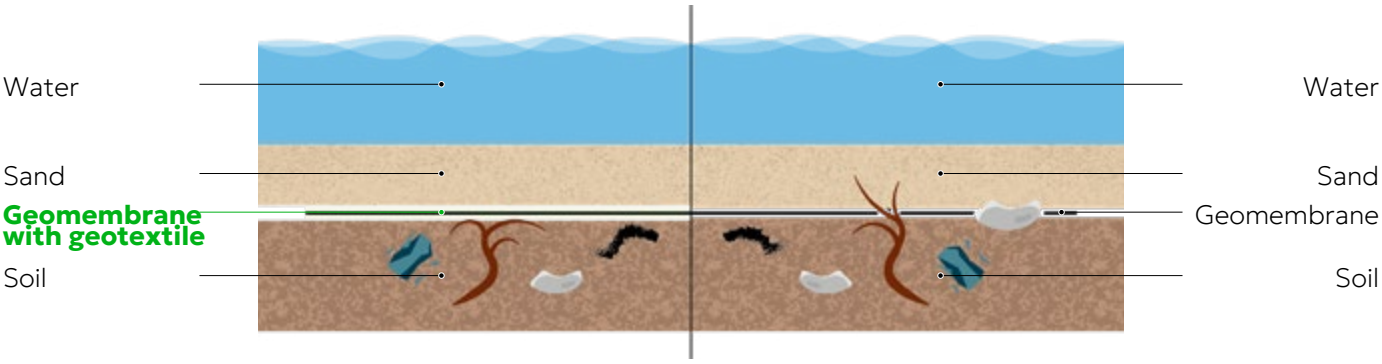
PREVENTING MIXING OF LAYERS OF BULK MATERIALS



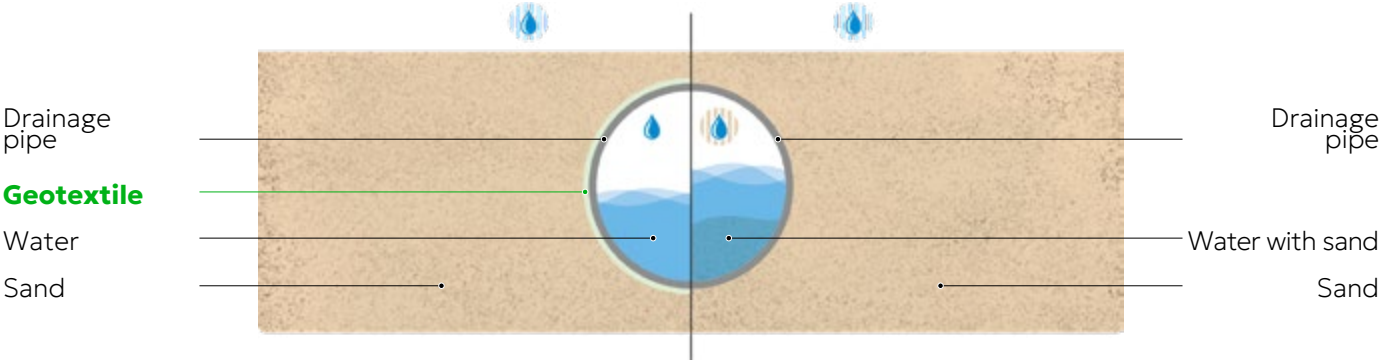
UNIFORM DISTRIBUTION OF MOISTURE

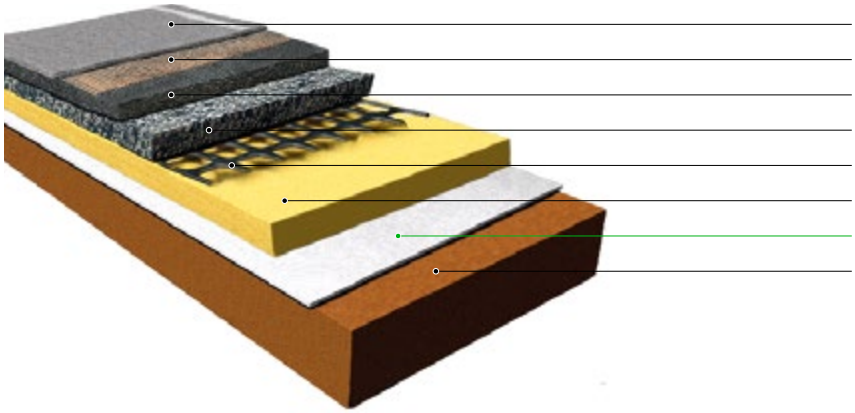


PROTECTION OF GEOMEMBRANE



PROTECTION FROM ENTRY OF MATERIAL FRACTIONS INTO THE DRAINAGE SYSTEM





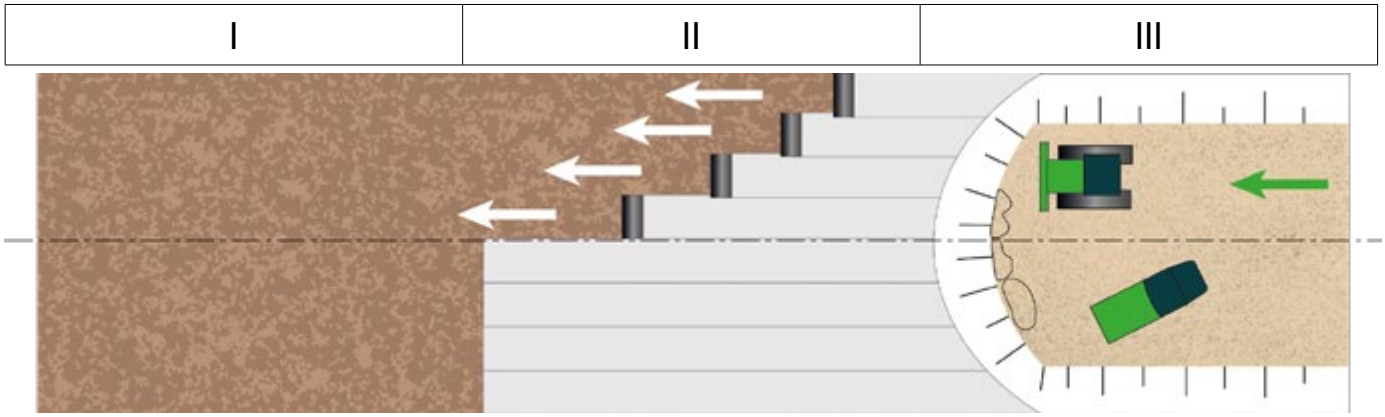
Asphalt pavement
Geogrid SSNP / PE
Asphalt
Crushed stone
Geogrid PP
Sand
Geotextile
Soil

RATIONALE FOR USE

Geotextiles separate layers of materials, preventing them from mixing, which ensures the stability of the base and uniform distribution of loads. Its filtering properties protect drainage systems and prevent the leaching of soil particles.

The use of the material reduces the cost of servicing facilities, improving the mechanical characteristics of structures and increasing their service life. In addition, geotextiles optimize the costs of building facilities, allowing the use of a smaller volume of bulk materials, and also create inexpensive but effective drainage solutions for modern drainage systems.

LAYING TECHNOLOGY



I. Preparing the base. Clear the surface of debris, roots and irregularities, level and compact the soil.

II. Laying and fixing. Spread the material along the area, avoiding folds, with an overlap of 20-30 cm, and secure the edges with anchors or weigh down with stones.

III. Backfilling the layer. Apply a layer of crushed stone, sand or other material, evenly distributing it over the geotextile, avoiding damage.

GEOFLAX
geosynthetic material

PRODUCTION OF GEOTEXTILES GEOFLAX

600 kg/h
Line productivity

1 – 6 m
Web width

100 – 1000 g/m²
Web density

12 600 t
Production volume of three geotextile lines

The material then passes through a pre-ripper, an oiling system to remove static electricity and a fine ripper, where the final opening of the fibre occurs. Canvas is processed in a converter, where the width and thickness of the future geotextile are set.

The material is then passed through needle punching machines to form the web and a heat-setting caulking for increased strength. The trimmed edge is returned to the line and finally a roll is formed, which undergoes control weighing and packaging.

GeoSM produces high quality geotextiles to State Standard, thanks to the high-tech and modern equipment as well as the careful quality control at all stages of production.

GEOFLAX
geosynthetic material


GEOFLAX
geosynthetic material

GEOMEMBRANE GEOFLAX

Geomembrane Geoflax – a rolled polymer insulation material with high strength and resistance to petroleum products, oils, acids, corrosion and rot, with zero absorption coefficient and 100% water-tightness. It is used to create artificial reservoirs, storage tanks, various reservoirs, waterproofing of industrial building foundations, as well as for the creation and reclamation of solid waste and solid municipal waste landfills.

Parameters	Geoflax					Geoflax PRO				
	1,0	1,5	2,0	2,5	3,0	1,0	1,5	2,0	2,5	3,0
Raw material	HDPE / LDPE									
Thickness, mm	1,0	1,5	2,0	2,5	3,0	1,0	1,5	2,0	2,5	3,0
Variants	Smooth / Textured									
Density, not less than, g/cm^3	0,94									
Water permeability / water absorption	None									
Tensile strength in the longitudinal direction, at break, kN/m	18	27	36	45	54	27	40	53	67	80
Tensile strength in the transverse direction, at break, kN/m	18	27	36	45	54	27	40	67	67	80
Relative elongation at break of the fabric in the longitudinal / transverse direction, %	500					700				
Yield strength, kN/m, not less than	10	15	20	25	30	15	22	27	37	44

Function:

- Waterproofing
- Protection against physical influences
- Protection against aggressive chemicals

Application areas:

- Road construction
- Agriculture
- Landfills for solid waste, liquid waste and solid municipal waste

GEOFLAX
geosynthetic material

GEOMEMBRANE WITH GEOTEXTILE GEOFLAX

Geomembrane with geotextile Geoflax is a rolled geosynthetic material, which is a geocomposite consisting of geomembrane and nonwoven geotextile fused into its structure. non-woven geotextile fused into its structure. It is used to create artificial reservoirs, storage tanks, various reservoirs, waterproofing of foundations of industrial buildings and landfills. buildings and landfills of solid, liquid and solid waste.

Parameters	**1,0**	**1,5**	**2,0**	**2,5**	**3,0**
Raw material	HDPE / LDPE				
Thickness, mm	1,0	1,5	2,0	2,5	3,0
Density, at least, g/cm^3	0,94				
Water permeability / water absorption	absent				
Longitudinal tensile strength, kN/m	12	18	24	30	36
Transverse tensile strength, kN/m	12	18	24	30	36
Relative elongation at web tear in longitudinal / transverse direction, %	350				
Yield strength, kN/m, not less	7	10	14	17	21
Number of sides bonded with geotextile	1 – 2				
Density of bonded geotextile	200 – 500				

Function:

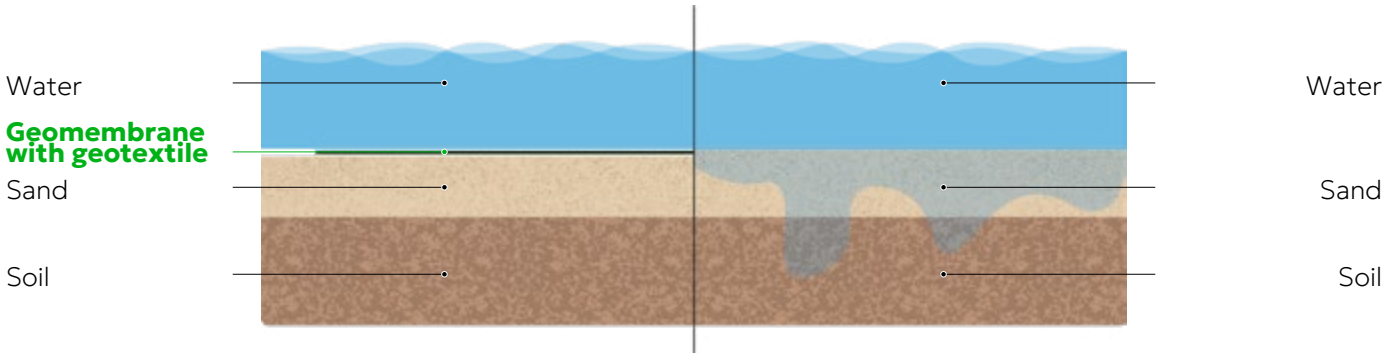
- Waterproofing
- Protection against physical influences
- Protection against aggressive chemicals

Application areas:

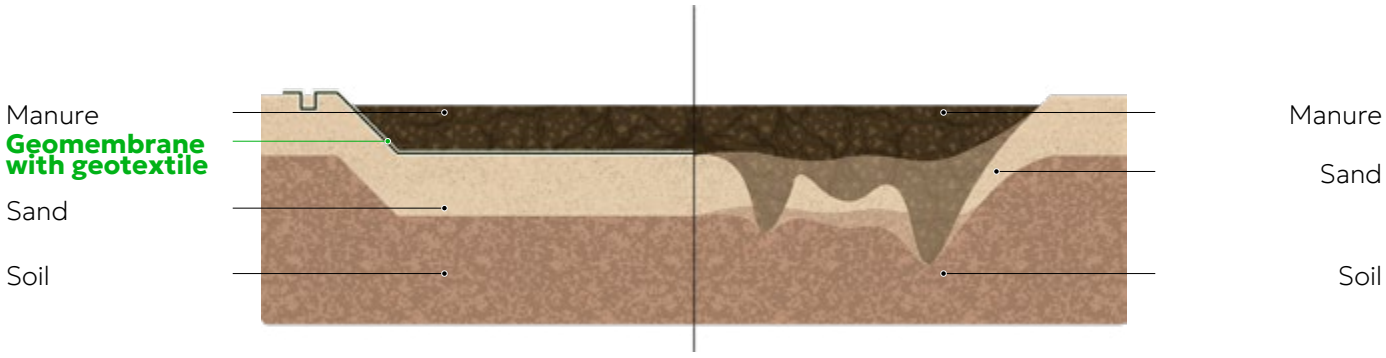
- Road construction
- Agriculture
- Landfills for solid waste, liquid waste and solid municipal waste

RATIONALE FOR USE
GEOMEMBRANE

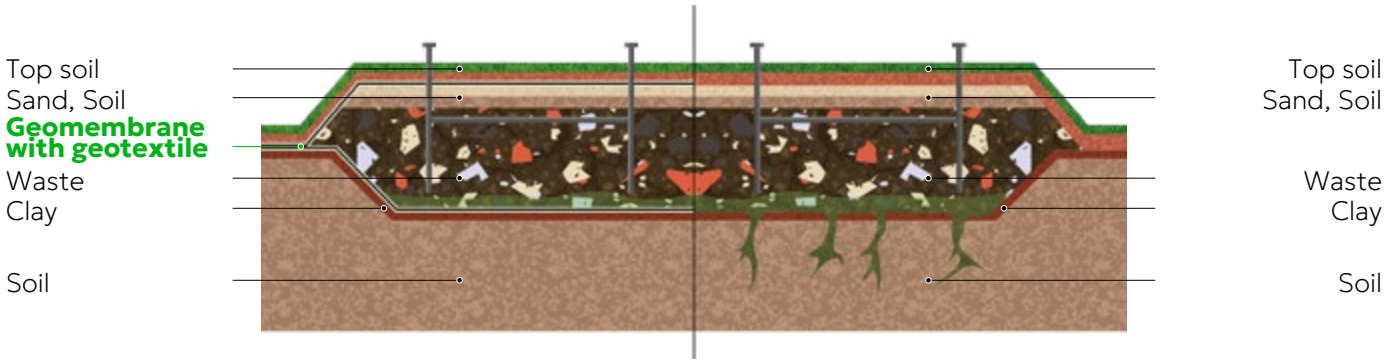
PROTECTION OF THE BOTTOM OF WATER BODIES FROM WASHING OUT

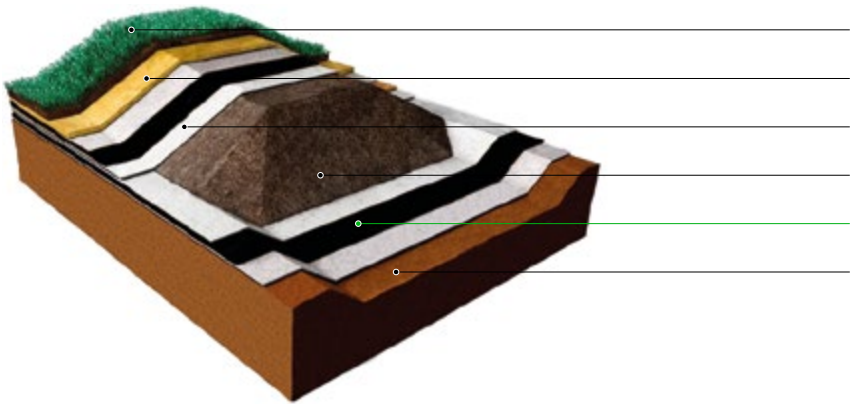


SCREENING OF LANDFILLS FOR MUNICIPAL WASTE, LIQUID WASTE AND MSW



SCREENING OF LIVESTOCK FARM MANURE RESERVOIRS





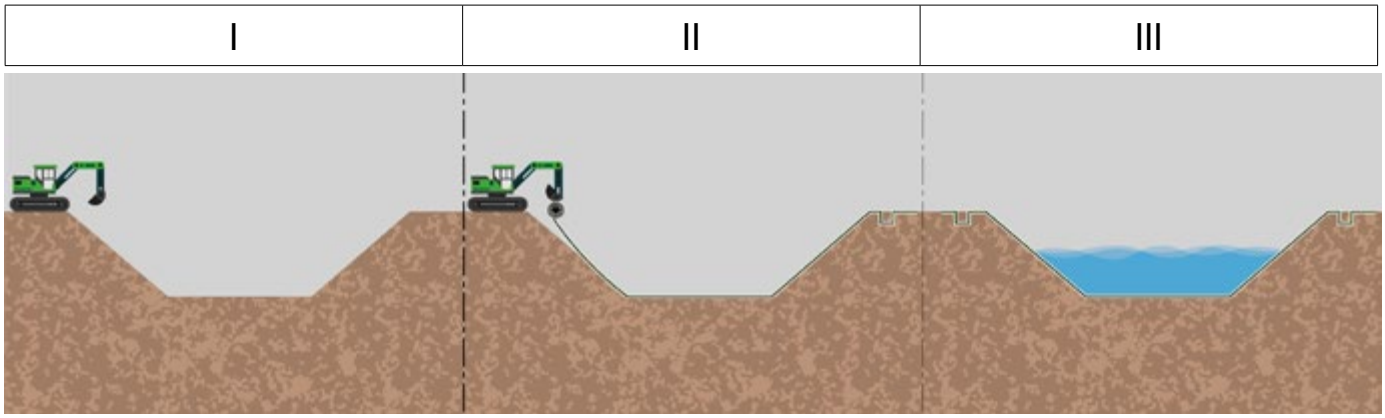
Vegetation layer
Sand
Non-woven geotextile
Municipal solid waste
Geomembrane
Soil

RATIONALE FOR USE

Geomembrane provides tightness even in aggressive environments. It protects structures and soil from water and liquid waste penetration, minimizing environmental risks.

The use of geomembrane reduces waterproofing costs, ensures durability of structures, and optimizes operating costs for facilities, preventing soil erosion and improving their stability.

LAYING TECHNOLOGY



I. Preparing the base. Clear the surface of debris, roots and sharp objects, level and compact the soil.

II. Laying the geomembrane. Lay out the membrane sheets on the prepared base, leaving an overlap of 10-15 cm for joining. Using special equipment, weld the membrane seams, ensuring their tightness.

III. Filling the object. After finishing the work, fill the object with water or other liquid.

GEOFLAX
geosynthetic material

PRODUCTION OF GEOMEMBRANE GEOFLAX

15 000 m²	to 6 m	0,5 – 4 mm	5 110 t
Productivity of the line	Web width	Geomembrane thickness	Volume of geomembrane production per year

At the first stage of production of the Geoflax geomembrane, the raw material is prepared: HDPE granules are mixed with an ultraviolet stabilizer and a dye. After that, the resulting mixture enters the main bin, is laid out on the extruder, where the process of its melting then takes place.

The prepared mass is fed onto calender shafts, on which the process of forming the thickness of future geomembranes takes place. The process of stretching and cutting the excess edge is then transferred to the shredder for further processing.

The finished sheet is fed into the accumulator, which is necessary for the uninterrupted operation of the line during roll cutting, after which the final stage begins, during which the geomembrane is wound and packaged.

Our geomembrane production line is the only one in the region. We have the ability to produce material from both secondary raw materials and primary materials according to State Standard.

GEOFLAX
geosynthetic material


GEOFLAX
geosynthetic material

GEOMEMBRANE GEOFLAX

Profiled membrane Geoflax is a roll-type insulating geosynthetic material with a relief surface, which is highly durable and resistant to mechanical damage. It is used for waterproofing, drainage, leak protection and reinforcement in construction, road, environmental and hydraulic engineering projects.

Parameters	Eco	Standart	Geo	Extra	Extra Geo
Raw material	HDPE				
The presence of a geotextile cloth (filter)	not	not	yes	not	yes
Total membrane weight, g/m^2	450	550	650	800	900
The thickness of the membrane with protrusions, mm	8				
Compressive strength, kPa	200	280	350	550	580
Maximum tensile force, not less, method A: longitudinal / transverse direction, N/5 cm	200/200	280/280	420/420	450/450	590/590
Maximum elongation, at least in the longitudinal / transverse direction, %	20/20	20/20	30/30	18/18	18/18
Water resistance at a pressure of at least 0.001 MPa for 24 hours	no traces of water penetration				
Flexibility on a beam with a radius 5 mm at low temperature, no more than, ˚C	-45				
Static pressure resistance, method B, not less than, kg	20				

Function:

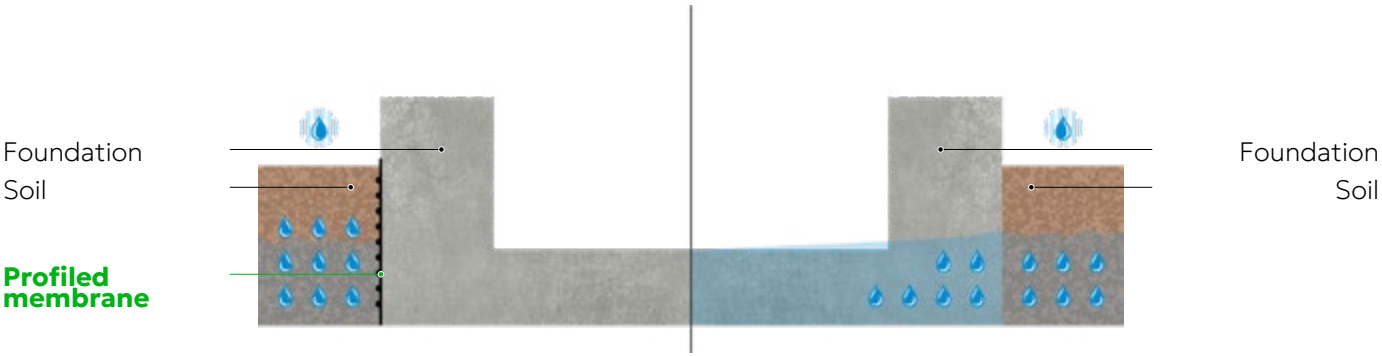
- Waterproofing
- Drainage

Application areas:

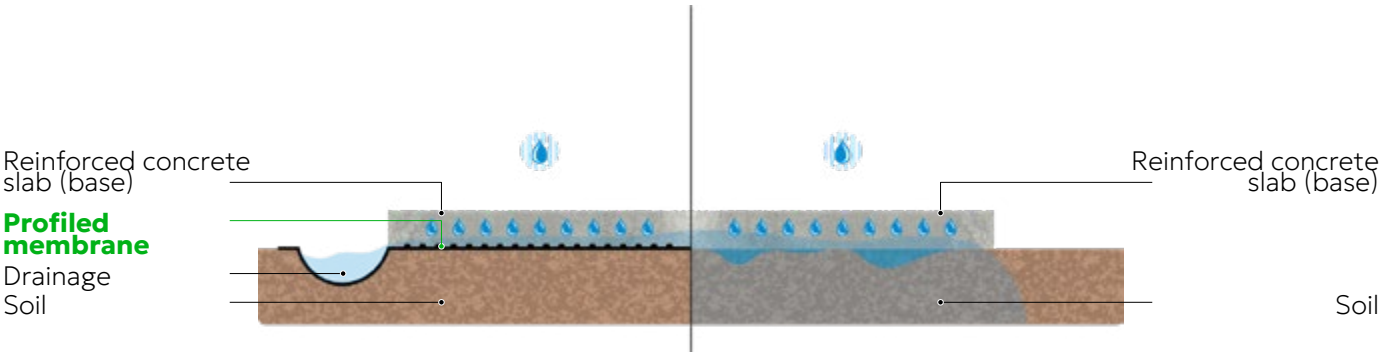
- Civil Engineering
- Industrial construction

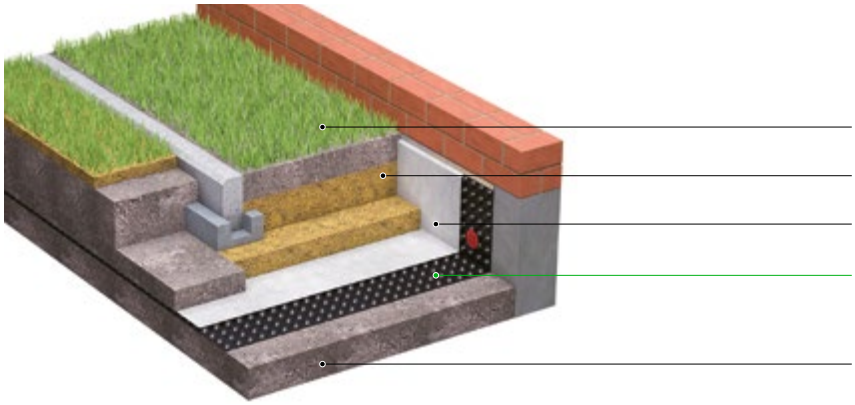
JUSTIFICATION FOR THE USE OF **PROFILED MEMBRANE**

STRUCTURAL WATERPROOFING



STRUCTURAL DRAINAGE





Vegetation layer
Sand
Geotextile
Profiled membrane
Soil

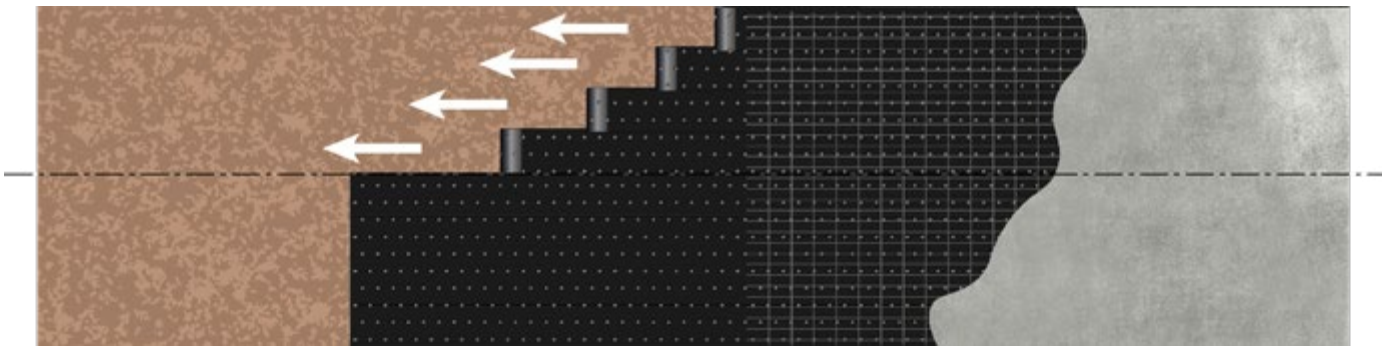
RATIONALE FOR USE

The profiled membrane provides effective waterproofing and drainage, preventing moisture accumulation and improving water drainage. Its relief structure reduces pressure on the structure and increases the strength of the substrate, ensuring the longevity and stability of facilities.

The use of profiled membrane reduces maintenance and repair costs, improving the performance of structures. The material also optimizes construction costs by reducing the need for additional layers and speeding up the installation process.

LAYING TECHNOLOGY

I	II	III	IV



I. Subgrade Preparation. Clear the surface of debris, roots and sharp objects, then level and compact the substrate.

II. Laying the profiled membrane. Roll out the rolls with the protrusions facing downward. As the rolls are laid, form longitudinal and transverse overlaps with a minimum size of 20 cm. End overlaps should be spaced apart (the distance between such joints should be at least 500 mm).

III - IV. Filling of the object. After laying the sheets and bonding the overlaps of the profiled membranes, install the reinforcement framework and lay the concrete mixtur.

GEOFLAX
geosynthetic material


GEOFLAX
geosynthetic material

GEOCELL GEOFLAX

Geocell Geoflax is a three-dimensional modular geosynthetic material, which is characterized by high strength, flexibility and resistance to biological degradation. Used for stabilization of soil layers in the reinforcement of the cones of the viaducts, anti-erosion protection of the slopes and embankments, as well as for reinforcing weak bases.

Parameters	**1,25**	**1,35**	**1,5**	**1,6**	**1,8**	**2,0**
Raw material	HDPE					
Geocell ribbon thickness, mm	1,25	1,35	1,5	1,6	1,8	2,0
Ribbon height, mm	50 / 100 / 150 / 200					
Tensile strength in longitudinal direction kN/m, at leats – non-perforated tape according to GOST 11262 – weld to GOST 16971	15 10	18,5 12	22 15	24 18	28 20	30 24
Relative elongation of flat ribbon to GOST 11262, % – rupture/yield strength	not less than 250 / not more than 30					
Operating temperature	from -60 to +70 °C					
Installation temperature	from -60 to +50 °C					
Flexibility at subzero temperatures to GOST 2678	not higher than -40 °C					
Chemical resistance pH	4-9					
Resistance to fungi to GOST 9.049	not higher than PG 113					
Toxicity	none					
Resistance to solar radiation	high					
Frost-resistance	at least 80%					

Function:

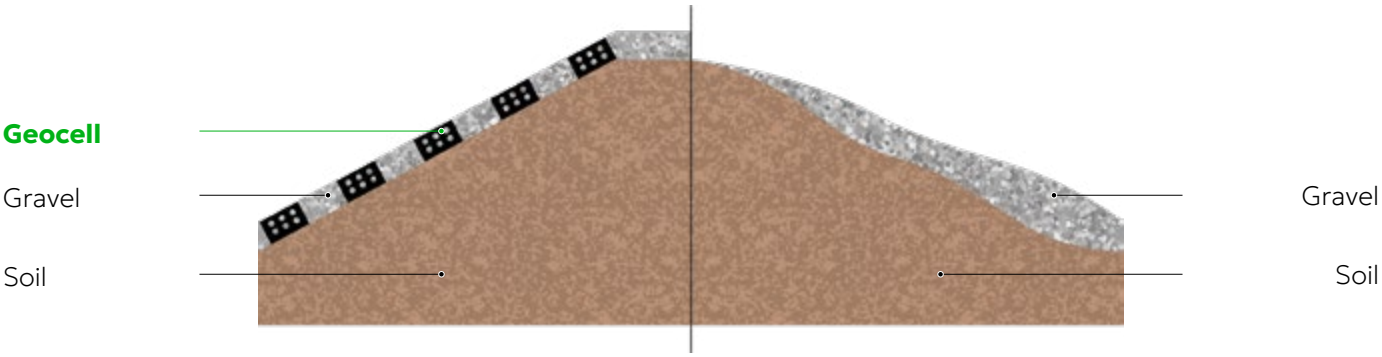
- Reinforcement of foundations
- Separation of layers

Application areas:

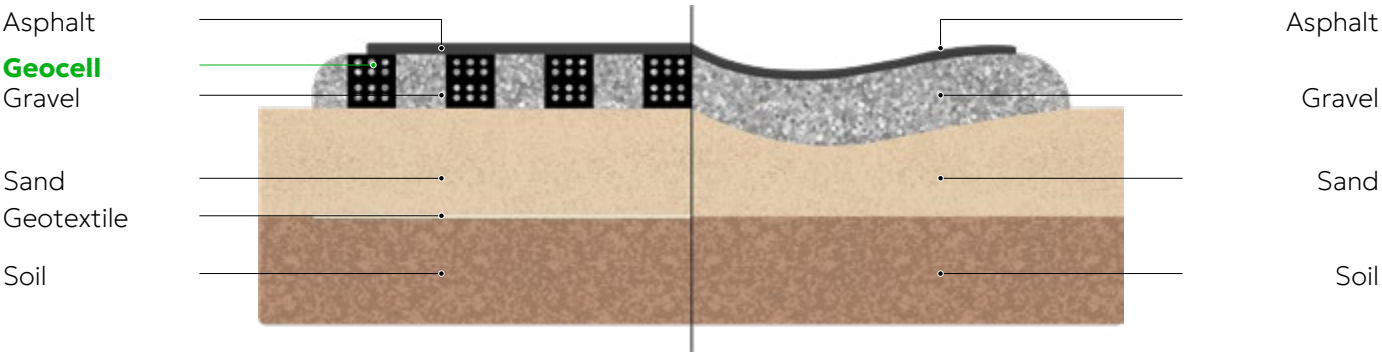
- Road construction
- Landscape design

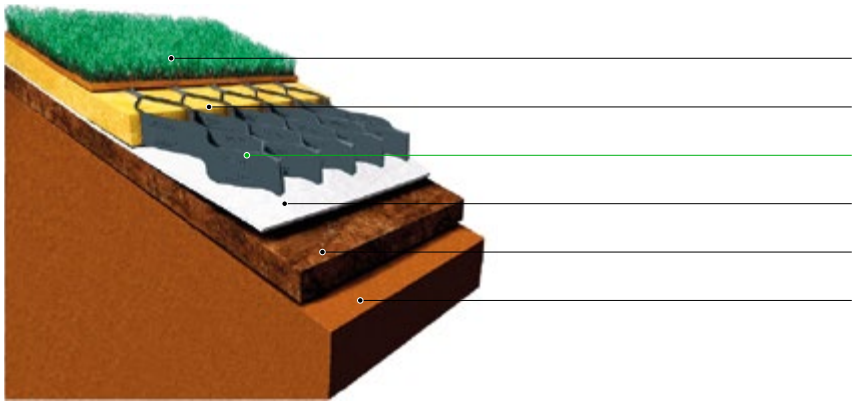
RATIONALE FOR USE
GEOCELL

STRENGTHENING OF SLOPES



STRENGTHENING OF ROAD SURFACE ON WEAK BASES





Lawn
Filler
Geocell
Geotextile
Cushion (gravel, sand)
Soil

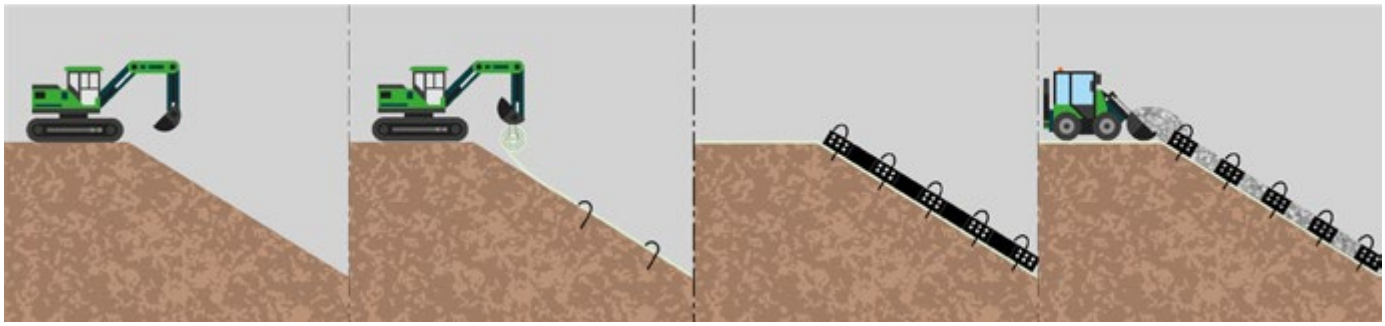
RATIONALE FOR USE

Geocell are used to stabilize soils, reinforce foundations and distribute loads, increasing the bearing capacity of objects. They work effectively in difficult conditions, strengthening slopes, embankments and reducing subsidence of foundations, which makes them especially useful in road and hydraulic engineering construction.

The use of geocell reduces costs by reducing the volume of bulk materials used to strengthen structures. It also reduces the cost of repair and maintenance of objects, increasing their durability.

LAYING TECHNOLOGY

I	II	III	IV



I. Preparing the base. Clear the area of debris, level and compact the soil.

II. Installing geotextiles. Spread the geotextiles without folds, overlapping the sheets by 20-30 cm, and secure the edges.

III. Stretching and securing the geogrid. Unfold the geogrid on the prepared surface and stretch it, securing the edges with anchors.

IV. Filling the cells. Fill the geogrid cells with material (crushed stone, sand or soil), evenly distributing and compacting it.

GEOFLAX
geosynthetic material

PRODUCTION OF GEOCELL GEOFLAX

4 000 m² in day	50 – 300 mm	1,1 – 1,5 g/m²	730 t
Line capacity	Diagonal cell size	Tape thickness	Geomembrane production volume per year

At the first stage of production of the Geoflax geocell, the HDPE raw material is mixed inside a hopper with a rotating screw, and then fed into the extruder container. Then, using high temperatures, it turns into a liquid mass, which is fed to rollers with an embossed surface, where the thickness and texture of the tape of the future material are set.

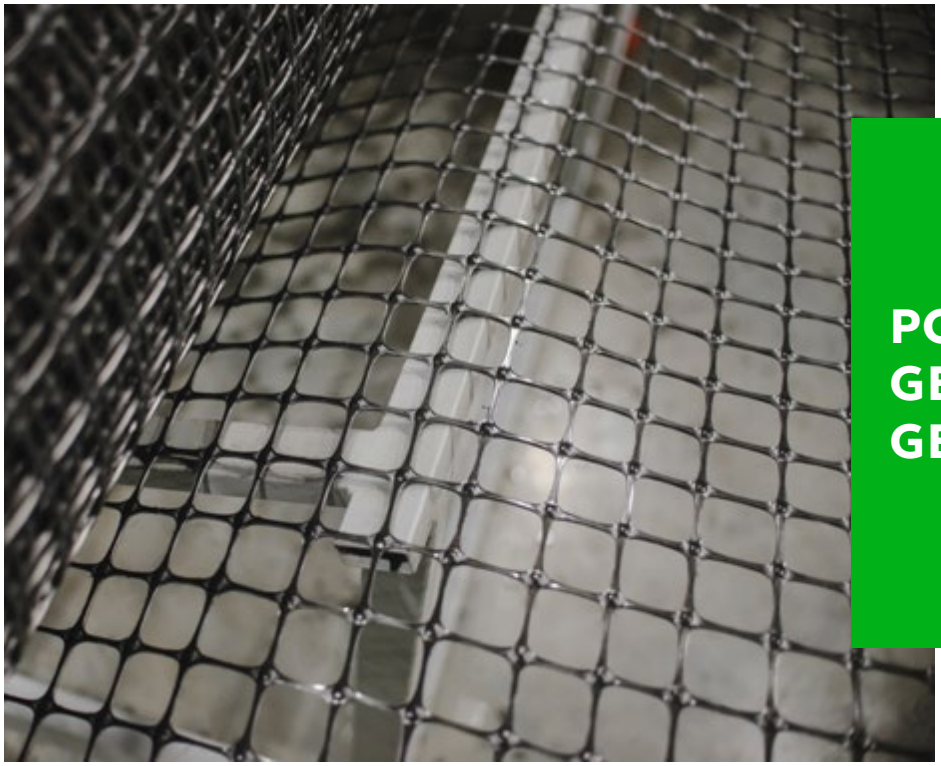
The excess edge is pulled through and cut off, and then crushed for further processing. Using a hydraulic press, drainage holes are punched in the geocell tape, and after perforation, the material is fed into a compensating reservoir.

At the next stage, using cutting knives, the height of the volumetric geocell module is created, and then the tapes are laid out along the length. The final stage is ultrasonic welding of the tapes together: this is how the cell size is formed, after which the finished geocell is packaged.

The main secret of durability of geocell Geoflax – ultrasonic welding of polymer strips. This joining process is of a higher quality than the conventional welding methods, and it increases the line's performance many times over.

GEOFLAX
geosynthetic material

GEOFLAX
geosynthetic material



POLYPROPYLENE GEOGRID GEOFLAX

Polypropylene geogrid Geoflax is a building material produced by extrusion from primary polypropylene. Used in the reinforcement of the lower layers of road clothing for construction of sidewalks, roads and large areas of open and closed types.

Parameters	SD-20	SD-30	SD-40	SD-45
Raw material	polypropylene			
Tensile strength, kN/m, not less than – along – across	 20 20	 30 30	 40 40	 45 45
Tensile strength at relative elongation of 2%, kN/m, not less than: – along – across	 7 7	 10 10	 13 13	 15 15
Tensile strength at relative elongation of 5%, kN/m, not less than: – along – across	 15 15	 21 21	 26 26	 30 30
Relative elongation at maximum load, %, not more than: – along – across	 15 15	 15 15	 15 15	 15 15
Cell size, mm – along roll length – along roll width	 35; 40; 65 39; 40; 65	 35; 40; 65 39; 40; 65	 35; 40; 65 39; 40; 65	 35; 40; 65 39; 40; 65
Cell skew	±3°	±3°	±3°	±3°
Roll width, m	4			
Roll length, m	50			

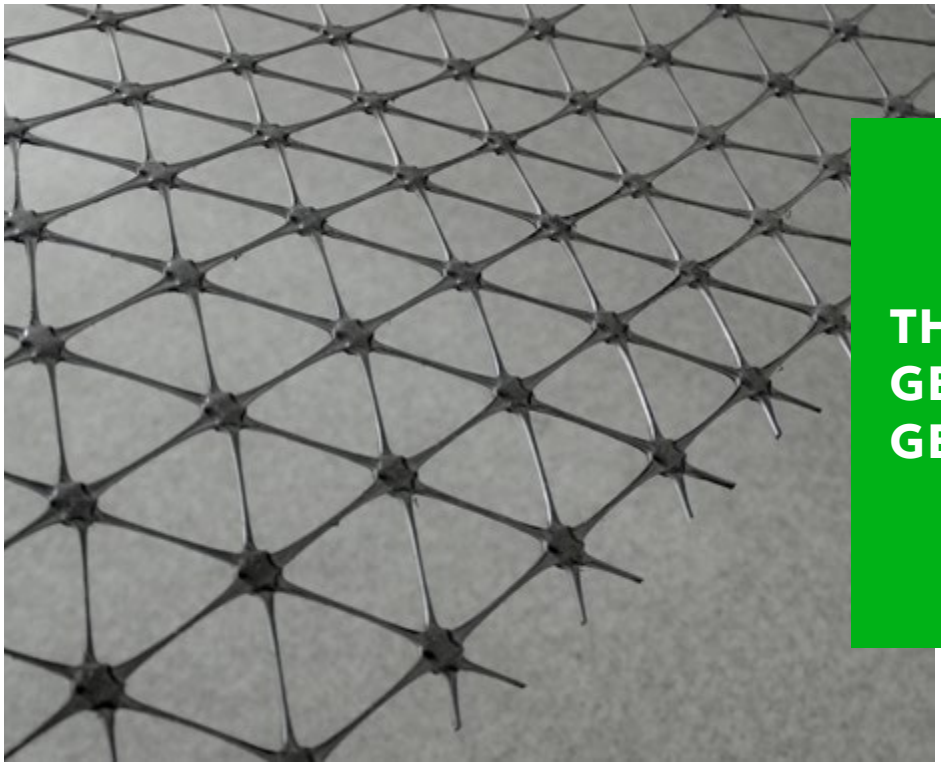
Function:

- Reinforcement of foundations
- Separation of layers

Application areas:

- Road construction
- Landscape design


GEOFLAX
geosynthetic material



THREE-AXIAL GEOGRID GEOFLAX

Polypropylene geogrid Geoflax is a building material produced by extrusion from primary polypropylene. Used in the reinforcement of the lower layers of road clothing for construction of sidewalks, roads and large areas of open and closed types.

Parameters	Geoflax 160	Geoflax 170	Geoflax 180
Raw materials	polypropilene		
Surface density, g/m^2	280	350	450
Maximum load during tensile tests in the longitudinal direction, kN/m, not less than	17	21	25
Maximum load during tensile tests in the transverse direction, kN/m, not less than	17	20	23,5
Maximum load during diagonal tensile tests, kN/m, not less than	17	22	25
Relative elongation at maximum load in the longitudinal direction, %, no more than	15		
Relative elongation at maximum load in transverse direction, %, no more than	15		
Relative elongation at maximum diagonal load, %, no more than	15		
Isotropy coefficient of radial rigidity, not less than	0,65		
Node efficiency, %, not less than	90		
Cell size, mm	40x40x40		
Roll width, m	4		
Roll length, m	50		

Function:

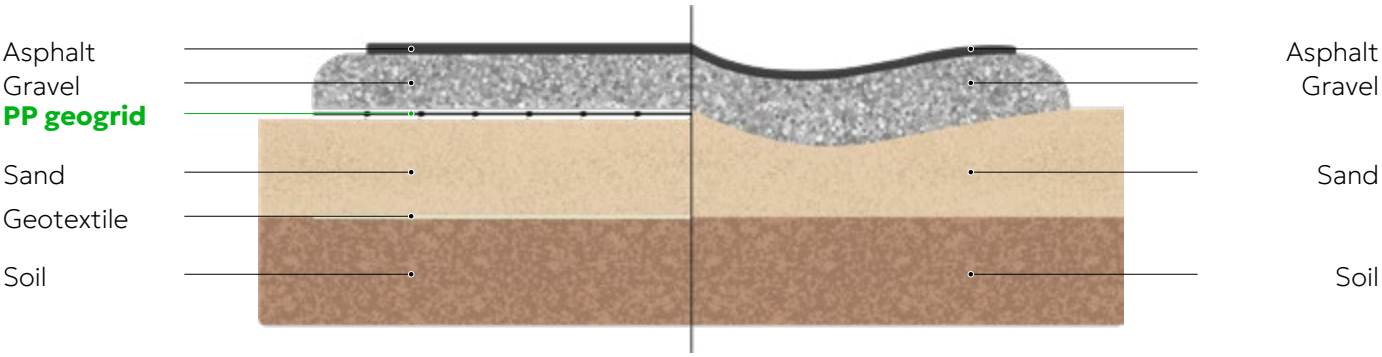
- Reinforcement of foundations
- Separation of layers

Application areas:

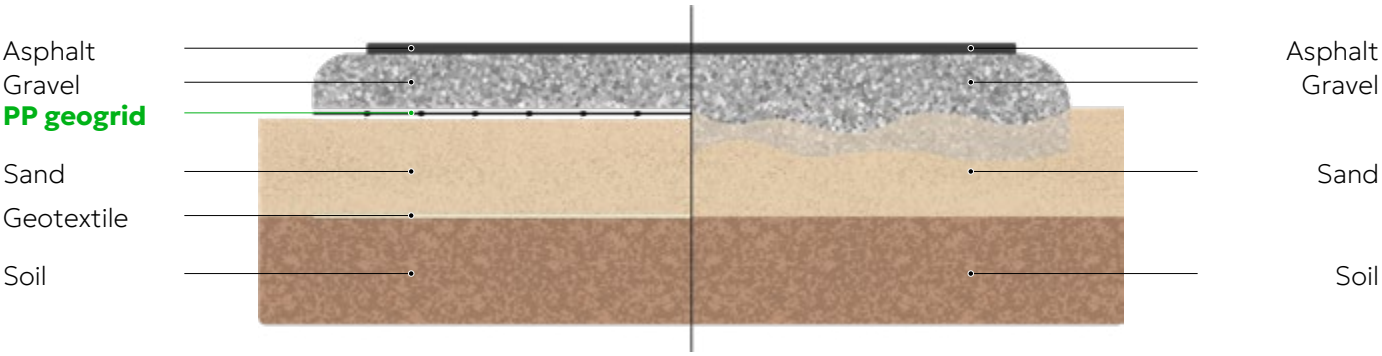
- Road construction
- Landscape design

RATIONALE FOR USE
POLYPROPYLENE GEOGRID

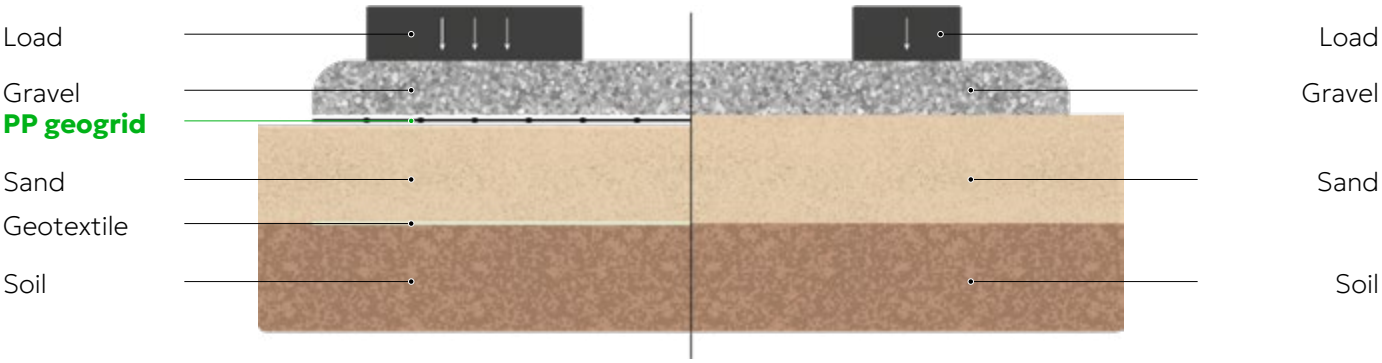
PREVENTING RUTTING



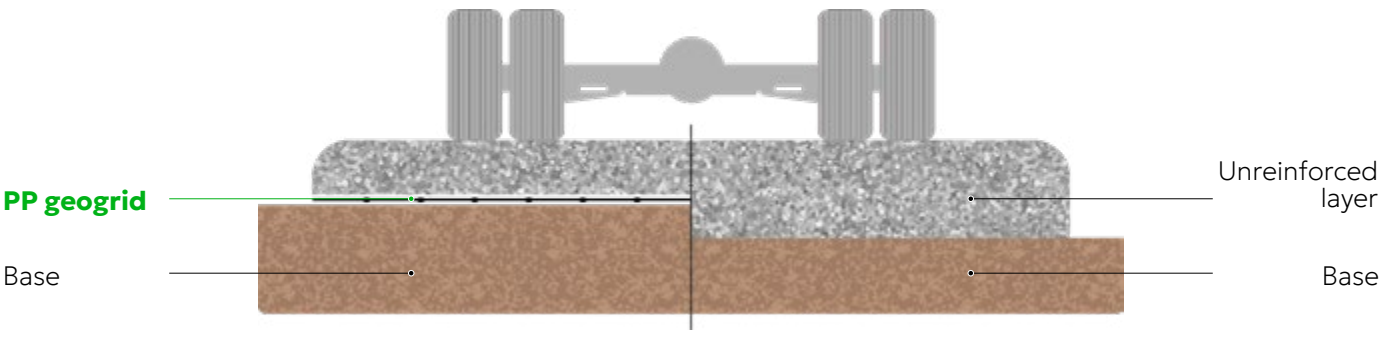
PREVENTING MIXING OF LAYERS OF BULK MATERIALS

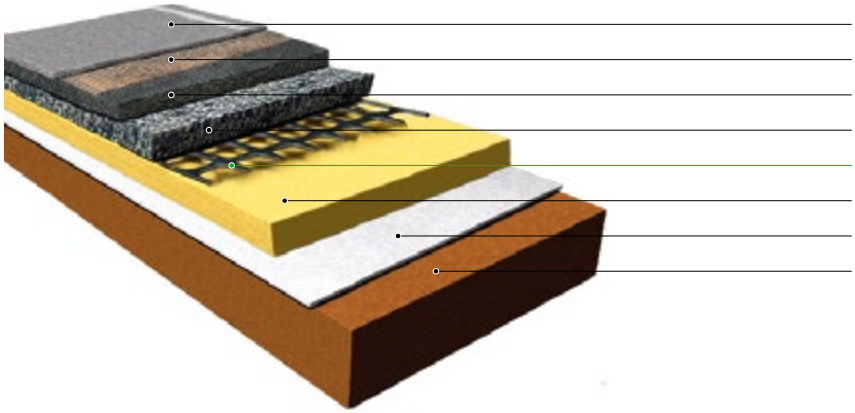


WITHSTANDING INCREASED LOADS



REDUCING LAYERS OF BULK MATERIALS





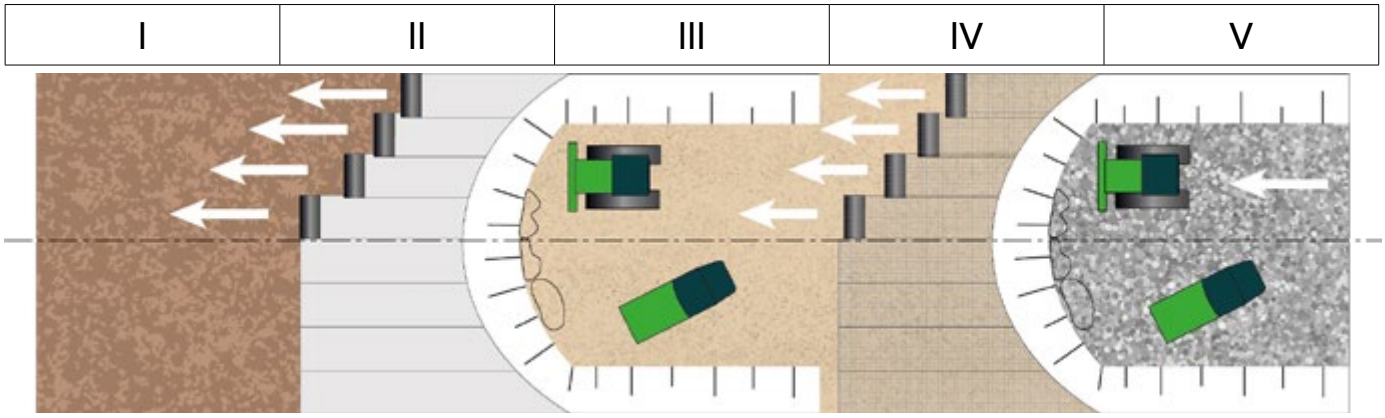
Asphalt pavement
SSNP / PE geogrid
Asphalt
Crushed stone
PP geogrid
Sand
Geotextile
Soil

RATIONALE FOR USING PP GEOGRID

Introducing PP geogrid into the road pavement structure strengthens the road surface, preventing interpenetration of the contacting layers. Due to interaction with the bulk base material, the geogrid blocks the movement of individual particles in the cells, forming a strong composite layer. This increases the resistance of the structure to dynamic loads and improves the mechanical characteristics of the base.

The economic rationale for using PP geogrid is to reduce the need for sand and crushed stone, which optimizes construction costs. It increases the service life of road surfaces and reduces repair and maintenance costs, preventing deformation and destruction of structures, which leads to a significant reduction in long-term maintenance costs of facilities.

LAYING TECHNOLOGY



I. Preparing the base. Clear the surface of debris, roots and irregularities, level and compact the soil.

II. Laying geotextile. Spread the geotextile on the prepared base without folds, overlapping the sheets by 20-30 cm, and fix the edges.

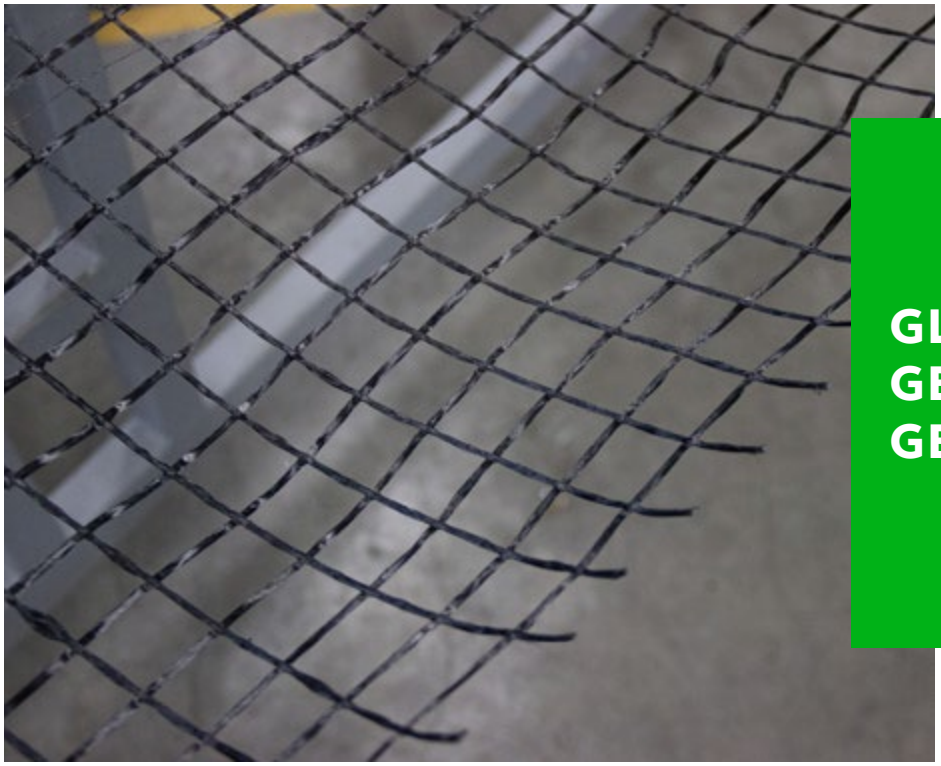
III. Backfilling with a sand layer. Evenly apply a layer of sand of the specified thickness and compact it thoroughly.

IV. Laying the geogrid. Spread the geogrid on the sand layer, level it, secure it with anchors, ensuring tension.

V. Backfilling with a crushed stone layer. Fill the surface of the geogrid with a layer of crushed stone, evenly distributing and compacting it to ensure the stability of the structure.

GEOFLAX
geosynthetic material


GEOFLAX
geosynthetic material



GLASS GEOGRID GEOFLAX

Glass Mesh Thread-Stitched Impregnated Geoflax – road construction material produced by the method of laying glass rovings on top of each other with their subsequent stitching with a specialized thread. It is used in reinforcing asphalt concrete layers of road surfaces of sidewalks, highways, general roads, bridges and overpasses.

Parameters	SSNP 50/50	SSNP 70/70	SSNP 80/80	SSNP 100/100	SSNP 120/120
Raw material	fiberglass				
Cell size, mm	20x20; 40x40				
Tensile strength, kN/m, not less than: – in longitudinal direction – in transverse direction	 50 50	 70 70	 80 80	 100 100	 120 120
Relative elongation at maximum load, %, not more than: – in longitudinal direction – in transverse direction	 3,0 3,0	 3,0 3,0	 3,0 3,0	 3,0 3,0	 3,0 3,0
Heat resistance, %, not less than	90	90	90	90	90
Determination of flexibility at negative temperatures	without defects				
Resistance to repeated freezing and thawing, %, not less than	95	95	95	95	95
Resistance to aggressive environments, %, not less than	95	95	95	95	95
Resistance to ultraviolet radiation, %, not less than	95	95	95	95	95

Function:

- Reinforcement of foundations

Application areas:

- Road construction


GEOFLAX
geosynthetic material

POLYESTER GEOGRID GEOFLAX

Polyester geogrid Geoflax is a rolled construction geosynthetic material with a mesh structure, produced from polyester fibers impregnated with a bitumen composition. It has sufficient tensile strength to prevent deformation, cracks and rutting on road and soil layers under the influence of destructive external factors. It is used in road construction and earthworks.

Parameters	50/50	70/70	80/80	90/90	100/100	50/50 with a backing
Raw material	polyester					
Impregnation	bitumen / PVC					
Surface density, g/m²	200	280	320	360	400	350
Maximum tensile strength, kN/m	50/50	70/70	80/80	90/90	100/100	50/50
Maximum elongation at break, %	13,0					
Cell size, ±2 mm	20x20, 25x25, 30x30, 40x40, 50x50					40x40
Roll width, m	from 4 to 5,2					
Roll length, m	50; 100					

Function:

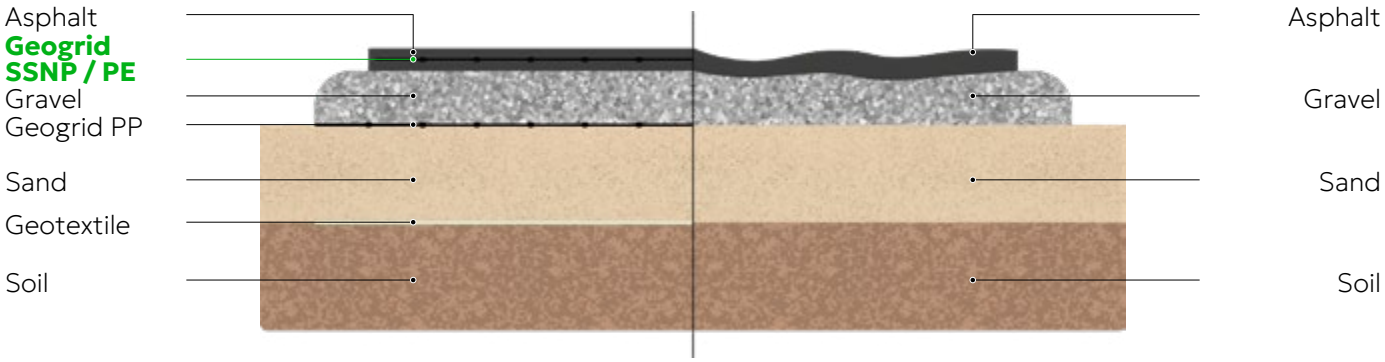
- Reinforcement of foundations

Application areas:

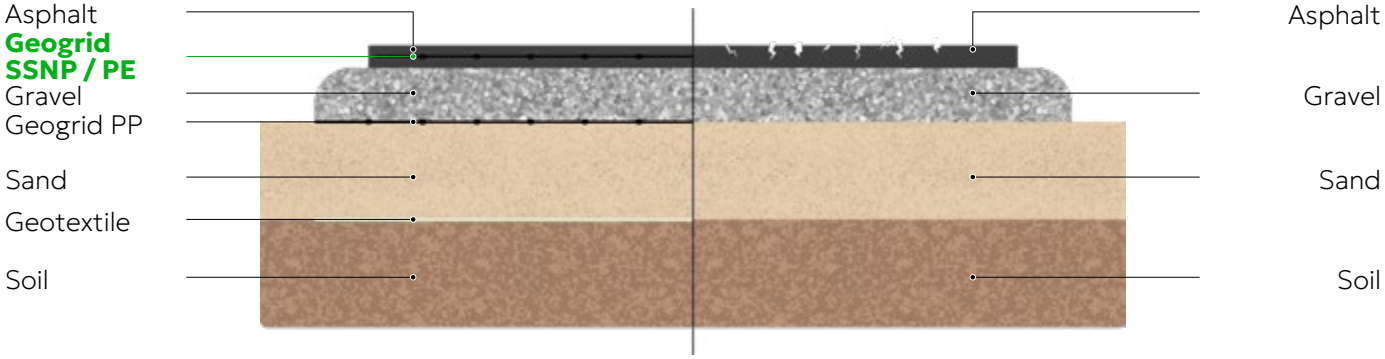
- Road construction

RATIONALE FOR USE
GLASS AND POLYESTER GEOGRIDS

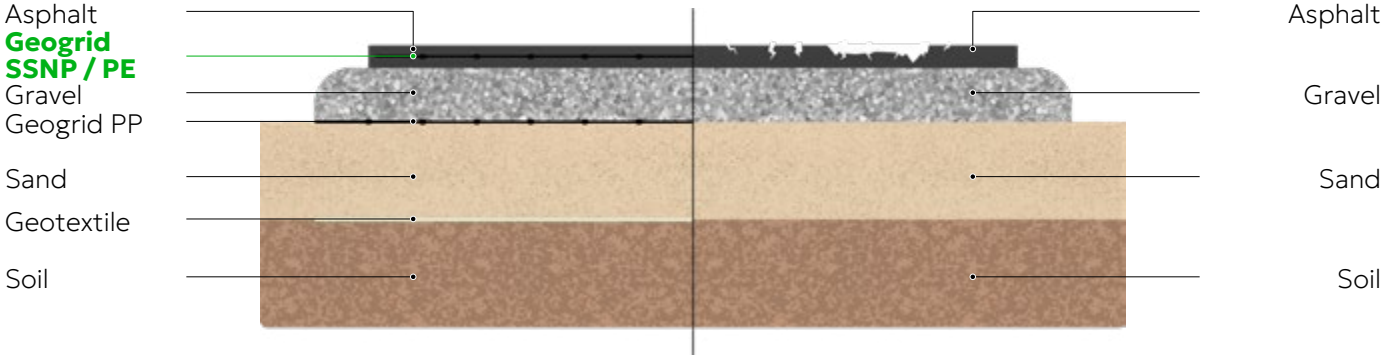
PREVENTING RUTATION



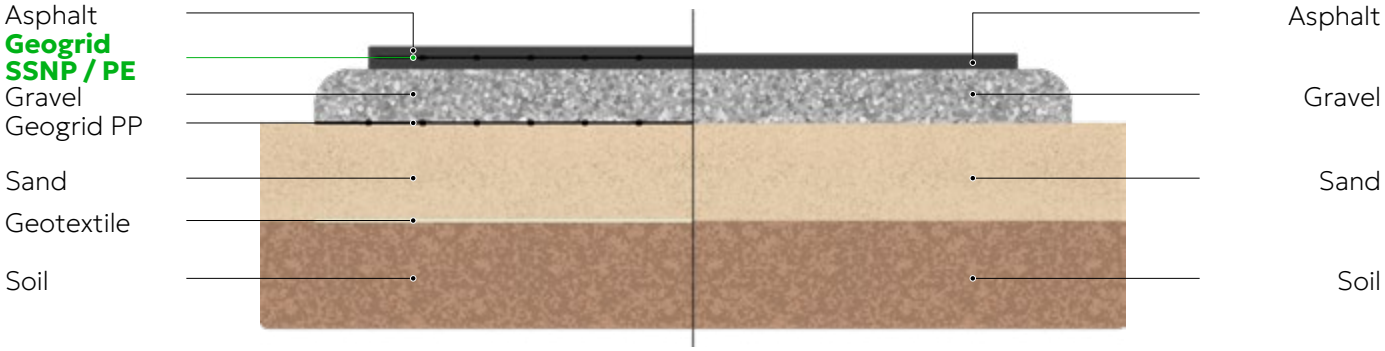
PREVENTING POOL FORMATION

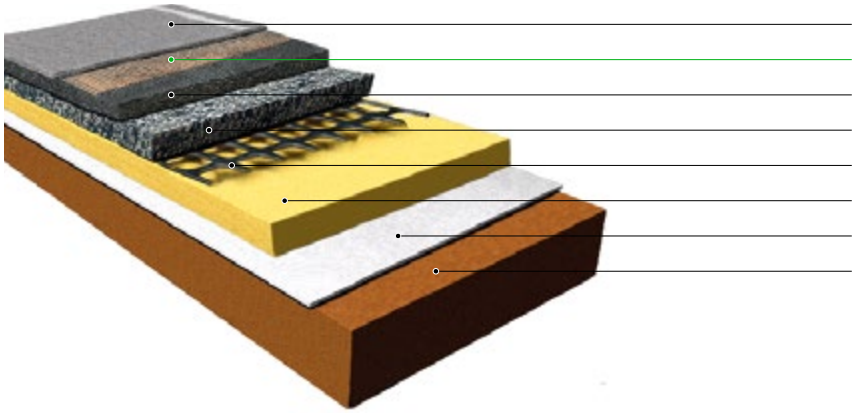


PREVENTING CRACKS



PROTECTION OF ASPHALT PAVEMENT FROM ROLLING





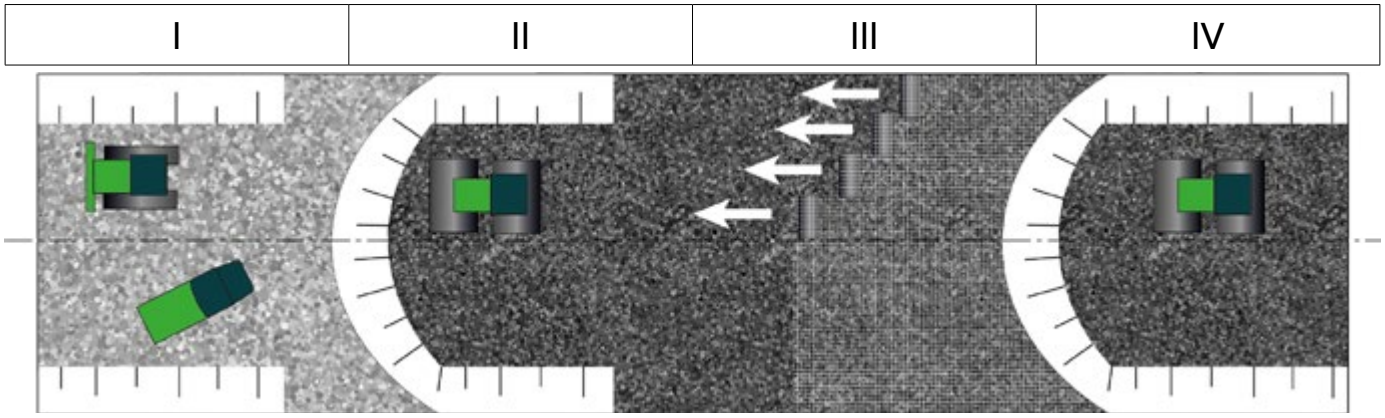
Asphalt pavement
Geogrid SSNP / PE
Asphalt
Crushed stone
Geogrid PP
Sand
Geotextile
Soil

RATIONALE FOR USING SSNP AND PE GEOGRIDS

Geogrids made of fiberglass and polyester are used to strengthen road structures, prevent cracking and increase the resistance of pavements to loads. Glass geogrids increase the service life of asphalt concrete pavements, and polyester geogrids improve the bearing capacity of weak foundations. Their use helps to increase the durability of objects such as roads and airfields.

The use of glass and polyester geogrids reduces the cost of repair and maintenance of objects, preventing cracking and improving their resistance to dynamic loads. These materials allow you to reduce the thickness of the asphalt layer without additional reinforcement of the bases, increasing the service life of objects and minimizing the costs of operation and restoration of infrastructure.

LAYING TECHNOLOGY



I. Backfilling the crushed stone and gravel layer. Prepare the base using a crushed stone and gravel mixture to create a level and stable base.

II. Laying the first layer of asphalt concrete (and pouring bitumen emulsion). Lay the first layer of asphalt concrete with pouring bitumen emulsion to improve adhesion to the base.

III. Laying the geogrid. Spread the geogrid on the prepared base, avoiding folds and distortions, overlapping the sheets by 10-20 cm if necessary. Secure the edges of the geogrid to prevent displacement.

IV. Laying the final layers of asphalt concrete. Lay the final layers of asphalt concrete on the geogrid to ensure the strength and durability of the coating.

GEOFLAX
geosynthetic material

COMPLETED PROJECTS
ROAD CONSTRUCTION

CRIMEAN BRIDGE

Location
Russia, Republic of Crimea

Supply volume
374 000 sq.m.

Material Geoflax
Geotextile 500, geomembrane 1.5 mm, geogrid 150 210*210

ROAD M-7 "VOLGA"

Location
Russia, Republic of Tatarstan

Supply volume
60 000 sq.m.

Material Geoflax
Geotextile 400

HIGHWAY M-29 "KAVKAZ"

Location
Russia, Gudermes

Supply volume
40 000 sq.m.

Material Geoflax
Geotextile 400

R-21 "KOLA"

Location
Russia, Kudrovo

Supply volume
110 000 sq.m.

Material Geoflax
Geotextile 350, Geotextile 400

COMPLETED PROJECTS
MSW AND MUNICIPAL WASTE LANDFILLS

MTPO SITE OF JSC "PO "SEVMASH"

Location
Russia, Arkhangelsk region

Supply volume
300 000 sq.m.

Material Geoflax
Geotextile 600, geomembrane 3 mm

MSW LANDFILL

Location
Russia, Pskov

Supply volume
204 000 sq.m.

Material Geoflax
Geomembrane 1,5 mm

MSW WASTE SORTING COMPLEX "ORB-NIZHNY"

Location
Russia, Nizhny Novgorod region

Supply volume
61 000 sq.m.

Material Geoflax
Geomembrane 2 mm

MSW LANDFILL

Location
Russia, Republic of Buryatia

Supply volume
50 000 sq.m.

Material Geoflax
Geomembrane 2 mm

COMPLETED PROJECTS
CIVIL CONSTRUCTION

RESIDENTIAL COMPLEX "FILI CITY"

Location
Russia, Moscow

Supply volume
156 000 sq.m.

Material Geoflax
Geotextile 500

FC KRASNODAR STADIUM

Location
Russia, Krasnodar

Supply volume
801 000 sq.m.

Material Geoflax
Geotextile 300, geogrid 200 210*210, geogrid SD-30

KRASNAYA POLYANA

Location
Russia, Esto-Sadok

Supply volume
206 000 sq.m.

Material Geoflax
Geotextile 600

PARK "TRI VULKANA"

Location
Russia, Kamchatka Krai

Supply volume
750 000 sq.m.

Material Geoflax
Geotextile 300

COMPLETED PROJECTS
INDUSTRIAL CONSTRUCTION

ARTIFICIAL POOL-EVAPORATOR

Location
Kazakhstan, Limannoye field

Supply volume
540 000 sq.m.

Material Geoflax
Geomembrane 1,5 mm

AGRO-INDUSTRIAL COMPLEX MIRATORG

Location
Russia, Korocha

Supply volume
1 090 000 sq.m.

Material Geoflax
Geotextile 400, geomembrane 1,5 mm, geogrid 150 210*210

MULTIMODAL COMPLEX UST-LUGA

Location
Russia, Leningrad region

Supply volume
291 000 sq.m.

Material Geoflax
Geotextile 300, geogrid SD-40

RASSKAZOVSKY PIG BREEDING COMPLEX

Location
Russia, Tambov region

Supply volume
285 000 sq.m.

Material Geoflax
Geotextile 400, geomembrane 1,5 mm

COMPLETED PROJECTS
MINING INDUSTRY

SVYATOGOR COPPER PLANT

Location
Russia, Krasnouralsk

Supply volume
321 000 sq.m.

Material Geoflax
Geomembrane 2 mm

CHERNIGOVETS OPEN MINING MINE

Location
Russia, Kemerovo region

Supply volume
378 000 sq.m.

Material Geoflax
Geotextile 500

MALMYZH MINING AND PROCESSING PLANT

Location
Russia, Khabarovsk Krai

Supply volume
12 000 sq.m.

Material Geoflax
Geomembrane 1,5 mm

NORTH-RUSSIAN DEPOSIT

Location
Russia, Yamalo-Nenets Autonomous Okrug

Supply volume
160 000 sq.m.

Material Geoflax
Geotextile 450

GEOSM geosynthetics | GEOFLAX

GEOFLAX GEOSYNTHETICS PRODUCTION

SAVE
CONTACTS

+7 (499) 322-14-98

GEO-SM.COM