



Products Catalog

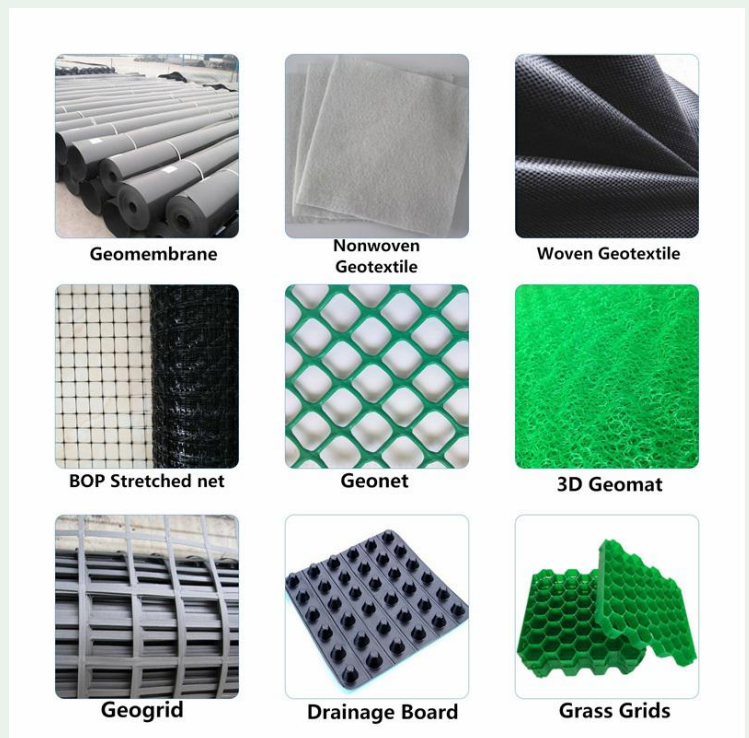
Shandong Obor New Materials Co.,Ltd

Add: Economic development zone, Tai'an, Shandong, China

Tel: 0086-538-8997789

Web: www.sdobor.com www.chinageomembrane.com

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HDPE Geomembrane

- **HDPE Pond Liner is produced from high density polyethylene resin by film-blowing process, adding carbon black, antioxidant, anti-aging and UV-resistance component.**



Artificial Lake



Landfill



Biogas Digester



Swimming Pool



River Levee



Fish Farm



ASTM Standard



Textured Surface



GB Standard

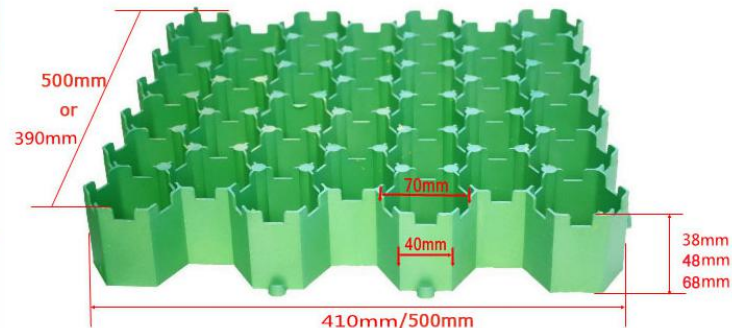
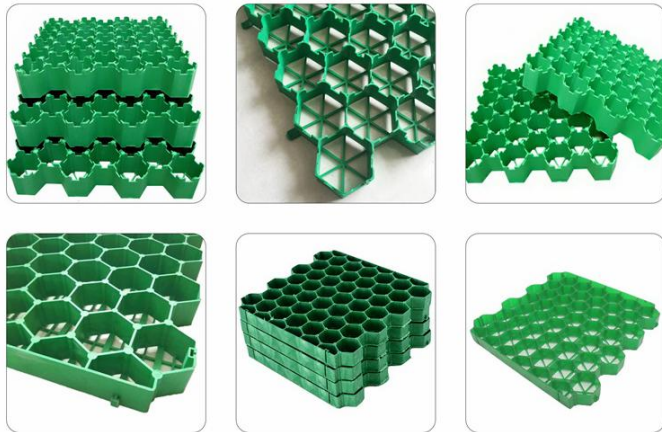


Recycled Material

- **It is the most widely used products for solid waste containment (such as landfill liners), mining and water containment applications.**

Properties \ Specification	Test method ASTM	GMS0.75	GMS1.0	GMS1.25	GMS1.5	GMS2.0	GMS2.5
Thickness	D5199	0.75mm	1.00mm	1.25mm	1.50mm	2.00mm	2.50mm
Density (≥)	D1505	0.940g/cc	0.940g/cc	0.940g/cc	0.940g/cc	0.940g/cc	0.940g/cc
Tensile Properties (Each direction) (≥) • yield strength • break strength • yield elongation • break elongation	D 6693 Type IV	11 kN/m 20kN/m 12% 700%	15 kN/m 27 kN/m 12% 700%	18 kN/m 33 kN/m 12% 700%	22 kN/m 40 kN/m 12% 700%	29 kN/m 53 kN/m 12% 700%	37kN/m 67kN/m 12% 700%
Tear Resistance (≥)	D 1004	93 N	125 N	156 N	187 N	249 N	311 N
Puncture Resistance (≥)	D 4833	240 N	320 N	400 N	480 N	640 N	800 N
Stress Crack Resistance (≥)	D 5397	300 hr.	300 hr.	300 hr.	300 hr.	300 hr.	300 hr.
Carbon Black Content	D 1603	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%
Carbon Black Dispersion	D 5596	Note(1)	Note(1)	Note(1)	Note(1)	Note(1)	Note(1)
Oxidative Induction Time (OIT) (≥) (a)Standard OIT — or — (b)High Pressure OIT	D 3895	100 min.	100 min.	100 min.	100 min.	100 min.	100 min.
	D 5885	400 min.	400 min.	400 min.	400 min.	400 min.	400 min.

HDPE Grass Grids



• **High Quality Plastic Grass Grid** is produced from **high-molecular polyethylene** by using **high pressure** to inject plastic to form **bee nest-like shaped shell**, adding **fiber** and **age resistor**.

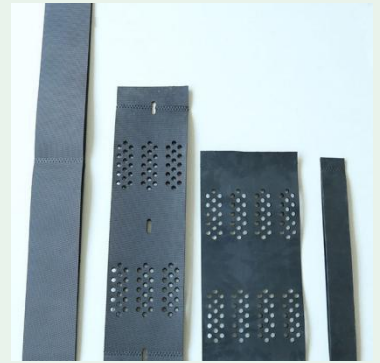
• It meets the requirements of **Parking, Fire engines, Fire climbing surface, Golf carts, Convention and Exhibition Center.**



Product Name	Plastic Grass Grid		
Model	GPP-38	GPP-48	GPP-68
Size(mm)	410×390×38	410×390×48	410×390×68
	500×500×38		500×500×68
Pressure Strength	160ton/sqm-250ton/m ²		
Material	HDPE (high-density polyethylene)		
Product Type	Virgin material and Recycled Material		
Durability	at least 4 years in neutral ground of 4 < pH < 9		
Working Temperature	Apply in temperature of -10℃ to 50℃		
Anti HCL	30%x24h, no visible change		
Thermal Aging	70℃x24h, no visible change		
Anti UV	UPE>30 T(UVA)AV<5%, qualified		

HDPE Geocell

Geocell is three dimensional, honeycomb like structures manufactured from high density polyethylene and jointly welded by ultrasonic technique. It is flexible to fold during the transport and installation on construction site. The geocell nets will be filled with soils, granular, cements or other on-site infill materials when stretched into web structures, which has powerful and rigid confinement in the lateral and vertical sides.

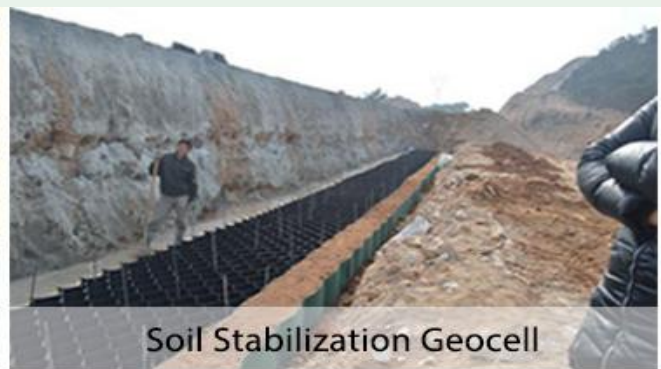


Applications:

- 1. Used for all kinds of road building, driveways, soil stabilization and embankment stabilization**
- 2. Used to stabilize river embankments.**
- 3. Used to prevent landslides.**
- 4. Using Geocell construction can greatly reduce labor intensity and reduce the thickness of the roadbed, construction speed, good performance and greatly reduce the project cost.**



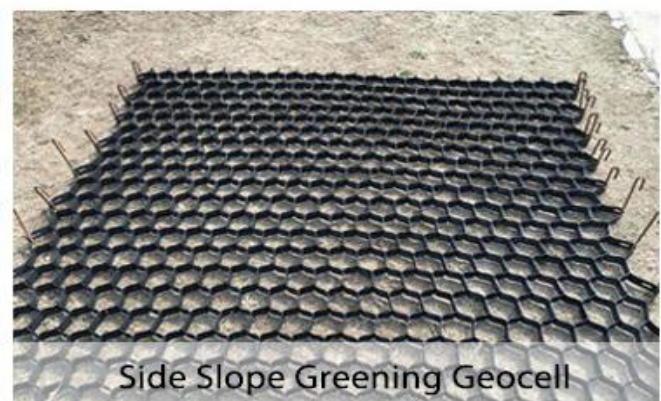
Plastic Gravel Stabilizer Geocell



Soil Stabilization Geocell



Garbage Landfill Geocell



Side Slope Greening Geocell

Material Properties	Unit					Test Method
Cell Depth	mm	75	100	150	200	
Polymer Density	g/cm ³	0.935-0.965				ASTM D 1505
Environmental Stress Crack Resistance	Hours	>400				ASTM D 5397
Environmental Stress Crack Resistance	Hours	6000				ASTM D 1693
Carbon Black Content	%	1.5% - 2.0%				ASTM D 1603
Nominal Sheet Thickness Before Texturing	mm	1.27 -5%,+10%				ASTM D 5199
Nominal Sheet Thickness After Texturing	mm	1.52-5%,+10%				ASTM D 5199
Strip Puncture Resistance	N	450				ASTM D 4833
Seam Peel Strength	N	1065	1420	2130	2840	EN ISO13426-1B
Seam Efficiency	%	100				GRI-GS13
Nominal Expanded Cell Size (width x length)	mm	320x287,475x508 etc				
Nominal Expanded Panel Size (width x length)	m	2.56x8.35, 4.5x5.0, 6.5x4.5, 6.1x2.44				

Product Type	Height (mm)	Welding Distance(mm)	Thickness (mm)	Seam Peel Strength of Welding Point(N/cm)	Tensile Strength of Connection of Cells(N/cm)	Tensile Strength at Yield of Each Sheet(N/CM)
smooth and Not Perforated	50≤H≤250	330≤A≤1000	1.0~1.2	≥100	≥120	≥200
smooth and Perforated	50≤H≤250	330≤A≤1000	1.0~1.2	≥100	≥120	≥200
textured and Not Perforated	50≤H≤250	330≤A≤1000	1.5~1.7	≥100	≥120	≥200
textured and Perforated	50≤H≤250	330≤A≤1000	1.5~1.7	≥100	≥120	≥200

Remarks: Width of the product can be made according to the customer's demand, and the other special standards will be carried out by agreement or contact. (The product has passed CE & ISO9001:2008 & ISO14001:2004 certification)

PP/PET Non Woven Geotextile



- Non woven geotextile is made of PP/PET staple fibers on cross-laying equipment and needle punched equipment. It owns the advantages of acid and alkali resistance, erosion resistance, aging resistance, large strength, stable size, good filterability etc.

- **Applications:**

Major functions: Separation, filtration, drainage, reinforcement, protection, and liquid barrier.



Item	1	2	3	4	5	6	7	8	9	10	11
Unit weight, g/m ²	100	150	200	250	300	350	400	450	500	600	800
Weight tolerance, %	-8	-8	-8	-8	-7	-7	-7	-7	-6	-6	-6
Thickness, ≥mm	0.9	1.3	1.7	2.1	2.4	2.7	3.0	3.3	3.6	4.1	5.0
Break strength, ≥KN/m	2.5	4.5	6.5	8.0	9.5	11.0	12.5	14.0	16.0	19.0	25.0
CBR burst strength, ≥KN	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.2	4.0
Tear strength, ≥KN	0.08	0.12	0.16	0.20	0.24	0.28	0.33	0.38	0.42	0.46	0.60
Width tolerance, %	-0.5										
Break elongation, %	25-100										
EOS O90, mm	0.07-0.2										
Vertical permeability coefficient, cm/s	K×(10 ⁻¹ -10 ⁻³)K=1.0-9.9										

PP Woven Geotextile



• **Woven geotextile mainly uses polypropylene(PP) as raw materials. After extruding, it has long term corrosion resistance in the soil and water with different PH; It has excellent microbiological degradation resistance; because this material is light and soft, so it is convenient to transport and install.**



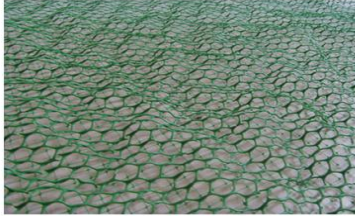
• Applications:

1. Construction of roads and other trafficked areas
2. Construction of railways
3. Earthworks, foundations and retaining structures
4. Use in drainage systems
5. Erosion control works
6. Construction of reservoirs and dams
7. Construction of canals
8. Construction of tunnels and underground structures
9. Use in solid waste disposal

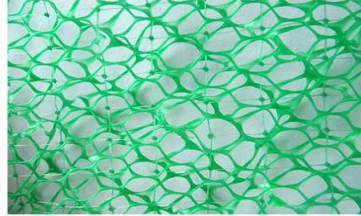
Mass Weight g/m ²	120	160	200	240	280	340	400
Break Strength KN/m \geq (LD)	20	30	40	50	60	80	100
Break Strength KN/m \geq (TD)	15	22	28	35	42	56	70
Break Elongation % \leq (LD,TD)	25						
Trapezoid Tear Strength KN \geq (LD)	0.3	0.45	0.5	0.6	0.75	1.0	1.2
Burst Strength KN \geq	1.6	2.4	3.2	4.0	4.8	6.0	7.5
Vertical Permeability Coefficient cm/s	10-1-10-3						
Sieve Size(O95.)mm	0.07-0.5						
Variation%	± 10						

3D Geomat -Erosion Control Mat

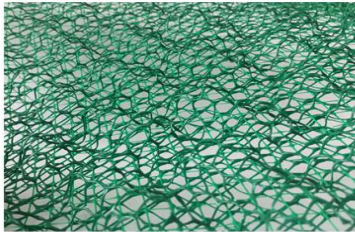
●3D Geomat is a new-typed seed planting material with tridimensional structure, which can effectively prevent the soil being washed away, increase the area of the virescence, improve the environment.



EM2



EM3



EM4



EM5

Application

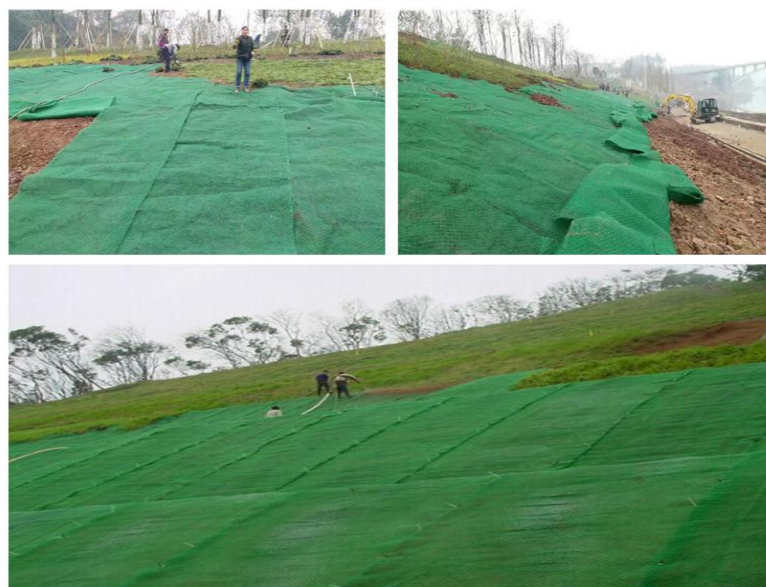
- seed distribution evenly on the slope
- enhance geothermal, and promote the seed germination, extend the growth period of plants.
- highway, railway, river channel, embankment and other slope, surface protection.

Standard Type (Slope Angle $\leq 45^\circ$)

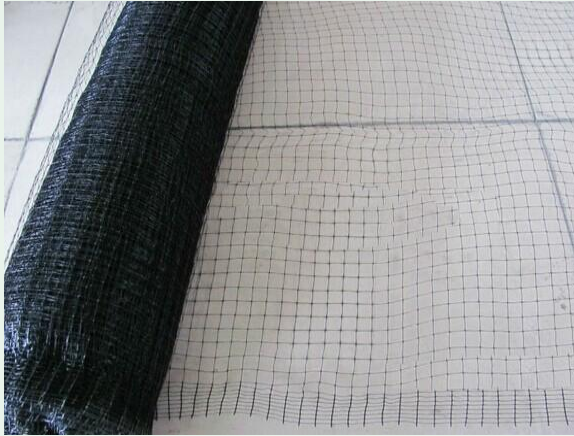
Item and Type	EM2	EM3	EM4	EM5
Unit Weight \geq (g/ m ²)	220	260	350	430
Thickness \geq (mm)	12	14	16	18
Tensile Strength \geq (kN/m)	0.8	1.4	2	3.2
Length(m)	30 or 50			
Width(m)	2			

High Tensile Strength Type (Slope Angle $45^\circ - 90^\circ$)

Item and Type	QEM3	QEM4	QEM5
Tensile Strength \geq (kN/m)	6-9	9-12	15-20
Elongation \leq %	10	10	10



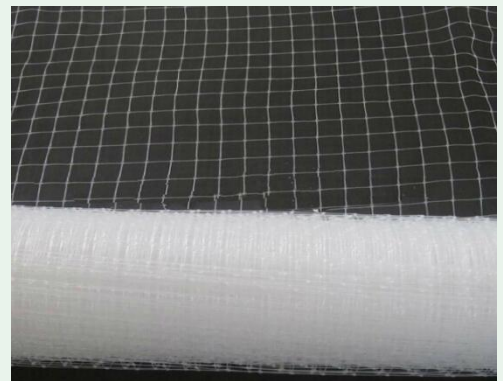
BOP Stretched Net



• **Plastic Extruded Net is made from PP, PE, containing UV protection and can be used as construction material, or make fruit bag, used as barrier, fence, used for garden, grass, plant, breeding animals, filter mesh in industry.**

• **Application:**

- 1) **Reinforcement net for geomat;**
- 2) **agricultural netting (anti-bird netting), the oriented size is 1-4cm, prevent all kinds of birds from destroying the agricultural products.**
- 3) **The BOP Stretched Net has the properties of good flexibility, high tensile strength, aging resistance, anti-erosion, etc**



Raw material	100% new HDPE/PP
Width	1-25m
Length	10-2000m, can be customized
Color	green, black, white or as required
Weight	10-80g/m2 or as required
U.V	As your required
Mesh Size	10*10mm, 12*12 mm, 15*15mm, 17*17mm, 20*20mm, 25*25mm, etc.
Using life	3-5years, normal weather conditions.
Packing	wrapped with Heavy duty plastic bag

HDPE Plastic Dimple Drainage Board

- **Drainage Board with holes** is made from high density polyethylene plastic and it is a kind of geomembrane with dimples on the surface. The dimples can be in cylinder and semi cone shape. It could also be coated by non woven geotextile. The liquid and gas can go through freely between dimples.



- **Applications:**

- 1.Greening project:** The garage roof greening, roof garden, vertical greening, roof greening, football pitches, golf course, etc.
- 2.Municipal engineering:** airport, road embankment, subway, tunnel, landfill, etc.
- 3.Construction:** the upper or lower building foundation, inside and outside the basement wall, floor and roof, roof seepage control and heat insulation layer, etc.
- 4.Water conservancy project:** the reservoir seepage water, reservoir,etc.
- 5.Traffic engineering:** highway, railway basement, roadbed, dam and slope protection layer, etc.

Drainage Board							
Item \ Model	DB08	DB10	DB12	DB16	DB20	DB25	DB30
Material	HDPE						
Dimple Height (mm)	8	10	12	16	20	25	30
Unit Weight (g/m ²)	1000	1100	1200	1400	1500	1600	1800
Thickness (mm)	0.7	0.8	0.9	1.0	1.1	1.1	1.2
Tensile Strength (KN/m)	3.5						
Compressive Strength (>kpa)	300						
Elongation ≥%	80						
Longitudinal Drainage ≥cm ³ /s	10	10	10	15	15	20	20
Puncture Strength (KN)	0.35						

HDPE Composite Geomembrane with Geotextile



• **Composite geomembrane is a new type of anti-seepage material made by infrared ray heat with geotextile and geomembrane (PE ,EVA etc.)**

Including:

- 1) One layer geotextile and one layer membrane ; Weight of base geotextile : 100g/m²-1000g/m² ; Thickness of geomembrane :0.1mm-1.5mm .**
- 2) Two layers geotextile and one layer membrane ; Weight of base geotextile : 80g/m²-600g/m² ; Thickness of geomembrane :0.2mm-1.5mm .**
- 3) One layer geotextile and two layers membrane ; Weight of base geotextile : 100g/m²-1000g/m² ; Thickness of geomembrane :0.1mm-0.8mm.**

Product weight (g/m ²)		400	500	600	700	800	900	1000
SPEC	1 layer geotextile+1 layer geomembrane	150/0.25	200/0.3	300/0.3	300/0.4	300/0.5	400/0.5	400/0.6
	2 layer geotextile+1 layer geomembrane	100/0.2/100	100/0.3/100	150/0.3/150	200/0.3/200	200/0.4/200	200/0.5/200	200/0.5/250
Breaking strength ,KN/m		5.0	7.5	10.0	12.0	14.0	16.0	18.0
Elongation at break		30---100						
Tear strength , KN		0.15	0.25	0.32	0.40	0.48	0.56	0.62
CBR Mullen burst strength		1.1	1.5	1.9	2.2	2.5	2.8	3.0
Vertical permeability coefficient		$k \times 10^{-11} \sim k \times 10^{-13}$						
Hydraulic pressure		0.4~0.6			0.6~1.0			

Company Information



- OBOR is a leader in geosynthetic products manufacturing with registered capital more than \$5 million and factory area of 100,000 square meters. The main varieties of products are HDPE / LDPE pond liner, Plastic Grass Grids, Woven/ nonwoven Geotextile, Drainage Board, Composite Membrane and Textile, Plastic netting, 3D Planting Geomat, and other geosynthetic products.
- The company has imported advanced testing equipment from abroad, with first-class technology and first-class testing method, to provide customers with high-quality and safe products and services.
- The company attaches great importance to the control of product quality, continuous improving production process and customer service. Our product performance testing and analysis are in full compliance with international quality testing standards, providing customers with quality products in strict implementation and higher standards to better meet customer's needs.

Add: Economic development zone, Tai'an, Shandong, China

Tel: 0086-538-8997789

Mobile: 0086-1855-3828-581 (Whatsapp/Wechat)

Email: sdobor01@126.com

Web: www.sdobor.com www.chinageomembrane.com