## SHANDONG GREENLAND ENGINEERING MATERIAL CO., LTD.

ISO9001: 2015, ISO45001: 2018, ISO14001: 2015, CE, CNAS, CRCC



Drainage Products: Composite Drainage Geomat



# Composite Drainage Geomat

Composite Drainage Geomat is a new type of geosynthetic material made of fused mesh of random filaments. It has high pressure resistance, large opening density, and has all-round water collection and horizontal drainage functions. The structure is a three-dimensional geomesh core with needle punched nonwoven geotextiles on both sides. The three-dimensional geonet core can quickly drain groundwater and has a pore protection system that can block capillary water under high loads. At the same time, it can also play an isolation and reinforcement role.

The drainage geomat is a new type of geosynthetic material made by smashing and melting the net. Drainage geomat has high pressure resistance, high opening density and comprehensive water collecting and horizontal drainage functions.

Geocomposite drain mat takes compact 3D PE net as matrix, and compounds with non-woven fabric on one side or both sides. Such structure provides excellent gas venting and water drainage, which can retain silt and soil particles effectively. It is widely used for surface drainage, erosion prevention and vegetation protection.





[Composite Drainage Geomat]

After the geotechnical mat is combined with the non-woven geotextile, it can collect rainwater that has penetrated through the soil covering layer or sewage discharged from the yard itself under the buried closed covering layer, and utilize its unique drainage function to drain the geotechnical material from the soil according to the engineering requirements. Orderly discharge in the mat interlayer without causing blockage. Possible sliding problems due to water saturation of the soil cover are thus avoided. Geotechnical mats can not only drain water, but also discharge the biogas produced by fermentation in the soil (especially garbage and waste), and are especially suitable for use in landfills. When used in combination with HDPE geomembrane, geotechnical mats can also protect the HDPE membrane from puncture.

#### Composite Drainage Geomat Features:

- Drainage blind plate is a new type of geosynthetic material. It has high pressure resistance, large opening density, and has all-round water collection and horizontal drainage functions.
- .• After the drainage blind plate is combined with the non-woven geotextile, it can avoid possible sliding problems caused by the water saturation of the soil covering layer.
- Drainage blind plates are especially suitable for use in landfills.
- When the drainage blind plate is used in combination with HDPE, it can also effectively protect the HDPE film from being punctured.
- Adapt to a wide temperature range.

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### APPLICATION

· Geotechnical mats are particularly suitable for use in landfills.

• When geotechnical mats are combined with HDPE, material costs can be saved, and construction efficiency is high and there is no waste.

• Due to its good permeability, drainage blind plates can also be used in irrigation systems and road drainage systems to effectively protect the environment and improve drainage efficiency.

- Drainage of tunnels, underground tunnels and underground yards.
- Reinforcing and draining the subgradeand shoulder of highway and railway.
- Drainage of tunnels, underground tunnels and underground yards.
- · Soil and water conservation of hillside land and slope development.
- Vertical and horizontal drainage of various retaining walls.
- Drainage of slippery ground.
- · Landfill drainage.
- Drainage of sports grounds, golf courses, baseball fields, football fields, parks, etc.
- Drainage of roof garden and flower terrace.
- · Construction drainage of building foundation works.
- Agriculture and horticulture underground irrigation and drainage system.
- Drainage system in low-lying wet land.

## SPECIFICATIONS OF COMPOSITE DRAINAGE GEOMAT

Executive standard: ASTM

Art No.		PLD0201	PLD0202	PLD0203	PLD0204	PLD0205	PLD0206	PLD0207	PLD0208	PLD0209
Item		Square shape				Circular shape				
Туре		YA7030	YA1435	YA1550	Y1235	YB60	YB80	YB100	YB150	YB200
Outer Size(mm)≥		70X30	140X35	150X50	120X35	Ф60	Ф80	Φ100	Ф150	Ф200
Cannular Size≥		40X10	40X10X2	40X20X2	40X10X2	Ф25	Ф45	Ф55	Ф80	Ф120
Weight≥		350	650	750	600	400	750	1000	1800	2900
Gap rate≥		82	82	85	82	82	82	84	85	85
Pressure Resistance	Flat rate 5%	60	82	50	70	80	85	80	40	50
	Flat rate 10%	110	120	70	110	160	170	140	70	70
	Flat rate 15%	150	160	125	130	200	220	180	100	90
	Flat rate 20%	190	190	160	180	250	280	220	125	120

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#### PROJECTS CASE OF COMPOSITE DRAINAGE GEOMAT



## [Foundation Drainage IN Indian] COMPOSITE DRAINAGE GEOMAT CONSTRUCTION

Construction method of Composite Drainage Geomat: 1.Preparation work

• Determine the construction area: According to the needs of the project, determine the area where geotechnical mats need to be laid.

• Clean up the construction area: Clean up debris, gravel, etc. in the construction area to ensure the smoothness of the construction area.

• Check the foundation conditions: Check the foundation in the construction area to ensure that the foundation meets the construction requirements of geotechnical mats.

#### 2.Laying geotechnical mats

• Unfold the geomat: Unroll the geomat from the rolled state, taking care to avoid creases and wrinkles.

• Check the laying quality: During the laying process of geotechnical mats, each layer of geotechnical mats should be inspected to ensure that it is flat and firm.

#### 3.Connect geotechnical mats and other structures

• Connect other structures: Where other structures need to be connected, use U-shaped iron clips, steel nails or welding to connect the geomat to other structures to ensure a strong and reliable connection.

• Handling pipeline crossings: For pipelines that need to pass through geotechnical mats, sufficient space should be left around the pipelines and corresponding protective measures should be taken to prevent the geotechnical mats from being damaged.

• Fix the geotechnical mat: use Ushaped iron clips or steel nails at the edges and joints of the geotechnical mat to fix it on the ground to ensure that the geotechnical mat does not will move.

Joint processing: Overlap or weld the joints of the geotechnical mat to ensure that the joints are firm.
Lay the next layer of geotechnical mat: After the first layer of geotechnical mat is laid, continue to lay the next layer of geotechnical mat. The overlaps should be staggered to increase the overall stability.

