## SHANDONG GREENLAND ENGINEERING MATERIAL CO., LTD.

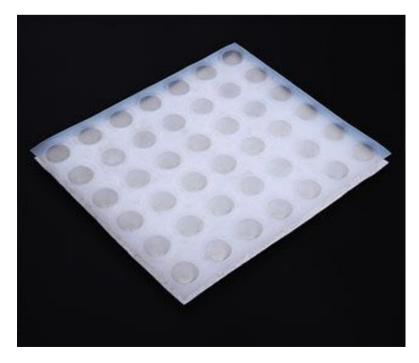
ISO9001: 2015, ISO45001: 2018, ISO14001: 2015, CE, CNAS, CRCC



Geocomposite Products: Siphon Composite Drainage Board



The siphon drainage system is composed of a three-layer combination of waterproof and root resistant puncture layer, waterproof drainage board, and waterproof filter layer, with one layer of material achieving three effects; This material is made of HDPE polymer material. When produced, the filter non-woven fabric is combined into a whole, eliminating the need to lay the filter fabric during construction. This saves time and ensures that the fabric and board will not be misaligned due to the movement or backfilling of construction personnel, resulting in a stable effect; The specifications of the entire sheet metal roll can be customized according to on-site needs, reducing overlap and nodes; The important effect of the board is its resistance to root thorns. Through testing by professional landscaping departments, it can prevent damage to the board in later use and ensure long-term stability of the collection effect.



# Siphon Composite Drainage Board

Siphon composite drainage board is a new type of drainage geotechnical material. It is made of high-density polyethylene (HDPE) as raw material and processed through a special extrusion molding process. It has two layers of special structure. The middle ribs are highly rigid, arranged longitudinally, and form a drainage channel. The ribs arranged crosswise up and down form a support to prevent the geotextile from being embedded in the drainage channel, and can maintain high drainage performance even under high loads. The combination of water-permeable geotextile bonded on top has the comprehensive performance of "reverse filtration-drainagebreathability-protection" and is currently the most ideal drainage material. The siphon drainage system is an important part of the building's water supply and drainage system.



#### Siphon Composite Drainage Board Features:

- Good drainage and good filtration effect, allowing organized water inflow without slope.
- Large bearing capacity, not easily deformed, resistant to moisture, and long use time.
- High surface flatness, integrated glue brushing and integrated process, good adhesive force.
- Convenient construction, shortening the construction period and reducing costs.
- Reasonable design: collect the infiltrated water and use it as water for garden irrigation to save water resources.
- Wide range of applications: It is suitable for deepsea operations and solves the problem of low strength of gabions made of other materials due to long-term erosion by sea water.

Siphon Composite Drainage Board

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#### Geocomposite Products:Siphon Composite Drainage Board

#### APPLICATION

Water conductivity and drainage performance:

Waterproof and drainage protection boards all have concave convex hollow vertical reinforcement structures, which can quickly and effectively drain rainwater, greatly reducing or even eliminating the static water pressure of the waterproof layer. Through this active water guiding principle, the effect of active waterproofing can be achieved.

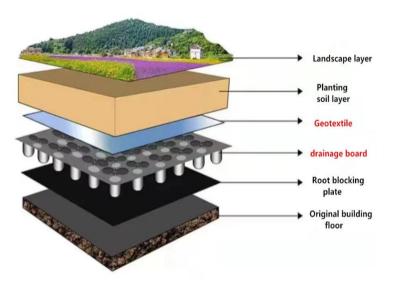
Protection:

Waterproof and drainage protection boards can effectively protect structures and waterproof layers, and resist various acids and alkalis in the soil and root thorns of plants. When filling the exterior walls of the basement with soil, it can protect the building and waterproof layer from damage.

Sound insulation and ventilation moisture-proof function:

Laboratory data shows that polyethylene (HDPE) and polyvinyl chloride (PVC) waterproof and drainage protection boards can effectively reduce indoor noise levels of 14 decibels and 500Hz, and have significant noise reduction and sound insulation functions. When using waterproof water guide plates on the ground or walls, they can also play a good role in ventilation and moisture prevention.

The application function of composite drainage boards can be bent and constructed at will, quickly draining the static water of the waterproof layer and HDPE geotextile water accumulation, timely reducing the load on the main structure, protecting the waterproof layer and structure, and avoiding damage to the waterproof layer by soil backfilling, plant root thorns, acid and alkali, underground insects, and microorganisms. Combined with the use of waterproof layer, it plays a dual waterproof and anti-seepage role, isolating gas and preventing oxidation, greatly improving the service life of the waterproof system.



#### DETAILLS OF SIPHON COMPOSITE DRAINAGE BOARD



### SPECIFICATIONS OF SIPHON COMPOSITE DRAINAGE BOARD

Item	Material	Height (mm)	Compressive Strength (≥KMPa)	Tensile Strength (≥KMPa)	Elongation (≥%)	Longitudinal Flow Capacity (cm2/s)	
WTPSB8	HDPE	8	270	300	25	5	300
WTPSB10	HDPE	10	300	300	25	5.6	300
WTPSB12	HDPE	12	300	300	25	5.9	300
WTPSB16	HDPE	16	300	300	25	6.2	300
WTPSB20	HDPE	20	300	450	40	11	330
Standard Packaging Roll(Width*Length)(m)				2m/ 3m * 15m/20m			
Remark: Special spec and sizes can be produced according to customers requirement.							

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## APPLICATION SCENARIOS OF SIPHON COMPOSITE DRAINAGE BOARD



[anti-seepage of attic in Morocco]

[the waterproof layer in Senegal ]

#### SIPHON COMPOSITE DRAINAGE BOARD INSTALLATION INSTRUCTIONS

#### When constructing drainage boards, attention should be paid to:

- Clean up garbage, cement, and level the site to ensure there are no obvious lumps.
- The bottom layer of the basement is impermeable, and the bottom layer is above the foundation.
- Lay drainage boards on the main wall of the building and protect the drainage boards outside with single wall or steel mesh cement.

• When laying drainage boards in any area, attention must be paid to not allowing soil, cement, yellow sand, and other garbage to enter the front space of the drainage board, ensuring that the space of the drainage board is not obstructed.

