

HYDRODUCT[®] 1000 (US Version)

Pre-fabricated geocomposite drain for high volume drainage with GCP waterproofing membranes

Product Description

HYDRODUCT 1000 is a strong, preformed 1 in. (25 mm) thick geocomposite drainage sheet system, comprising a hollow studded polystyrene core, covered on one side with a nonwoven, needle punched polypropylene filter fabric and on the other side with a smooth polymeric film.

Uses

HYDRODUCT 1000 is designed primarily for use with waterproofing materials in vertical installations as a high volume drainage composite. HYDRODUCT 1000 has been specially developed to provide a simple and highly practical collector and deflector of unwanted ground water on foundation walls, retaining walls, tunnels and planters. It can be used with PREPRUFE, PROCOR, or BITUTHENE waterproof membranes. When installed it minimizes the buildup of water against the structure. The construction of the studded sheet also creates an air void to isolate the structure from the effects of the surrounding ground. The drainage sheet must be connected into the site drainage system to minimize hydrostatic build-up and collect infiltrated water traditional perforated pipes wrapped and linked with the geotextile filter fabric to prevent clogging.

Product Advantages

- **High volume flow capacity**— 21 gal./min./ft. (261 L/min./m)
- **Enhances waterproofing**—eliminates hydrostatic pressure build-up
- **Efficient water collector/deflector**— can be used as a sandwich drainage layer between lagging and the reinforced concrete structure
- **Smooth polymeric sheet**—compatible with Preprufe, Procor, or Bituthene membranes
- **Geotextile fabric filter**—allows ground water to pass into the drain core while restricting the movement of soil particles
- **Economical**—eliminates imported aggregate drainage layers
- **Studded core**—allows water to flow to designated drainage collection points

Application Procedures

Safety, Storage and Handling Information

All construction products must be handled properly. Safety Data Sheets (SDS) are available at gcpat.com and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the SDS before use.

Installation

Position HYDRODUCT so that the geotextile fabric filter is facing toward the groundwater, soil or overburden. The solid polymeric film provides extra protection for waterproofing and should not be removed

In vertical applications, HYDRODUCT 1000 Drainage Composites can be applied to the substrate vertically but should extend from the perimeter discharge pipe to a point approximately 6 in. (150 mm) below the anticipated grade line.

Abut adjacent rolls with excess fabric overlapping in shingle fashion.

For inside and outside corners, abut adjoining drainage composite at the corner. Cover open core with extra geotextile filter fabric.

The exposed core along the top terminations should be covered with a strip of geotextile to prevent intrusion of soil into core. At the bottom termination extend the HYDRODUCT 1000 out from the structure so that it passes behind and under the perimeter discharge pipe. Additional geotextile should be wrapped over the pipe to prevent soil intrusion.

To secure HYDRODUCT 1000 around protrusions, apply HYDRODUCT Tape around the protrusion in a picture frame configuration. Cut HYDRODUCT 1000 to fit snugly around the protrusion. Press the cut edge firmly into HYDRODUCT Tape.

HYDRODUCT 1000 should be covered promptly. Do not leave HYDRODUCT 1000 exposed to sunlight for more than two weeks. Motor vehicles, construction equipment or other trades should not be allowed directly on the HYDRODUCT 1000.

Supply

HYDRODUCT 1000

Roll size 3 ft x 100 ft (0.91 m x 30.5 m) 300 ft² (27.9 m²)

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Drainage Core		
Polymer	High impact polystyrene	
Thickness	1 in. (25 mm) nominal	ASTM D1777
Compressive strength	9,500 lbs/ft ² (455 kPa)	ASTM D1621
Flow rate	21 gal/min./ft (261 L/min./m)	ASTM D4716
Measured at compressive load 3,600 psf (172 kPa) and a hydraulic gradient of 1.0		

Geotextile

Type	Nonwoven	
Polymer	Polypropylene	
Water Flow Rate	165 gal/min./ft ² (6,724 L/min./m ²)	ASTM D4491
Grab Tensile strength	100 lbs (445 N)	ASTM D4632
Puncture resistance	65 lbs (289 N)	ASTM D4833
Apparent opening size	U.S. Sieve No. 70 (0.21 mm)	ASTM D4751
Grab elongation	65%	ASTM D4632

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gcpat.com/solutions/products/hydroduct-drainage-composite/hydroduct-1000