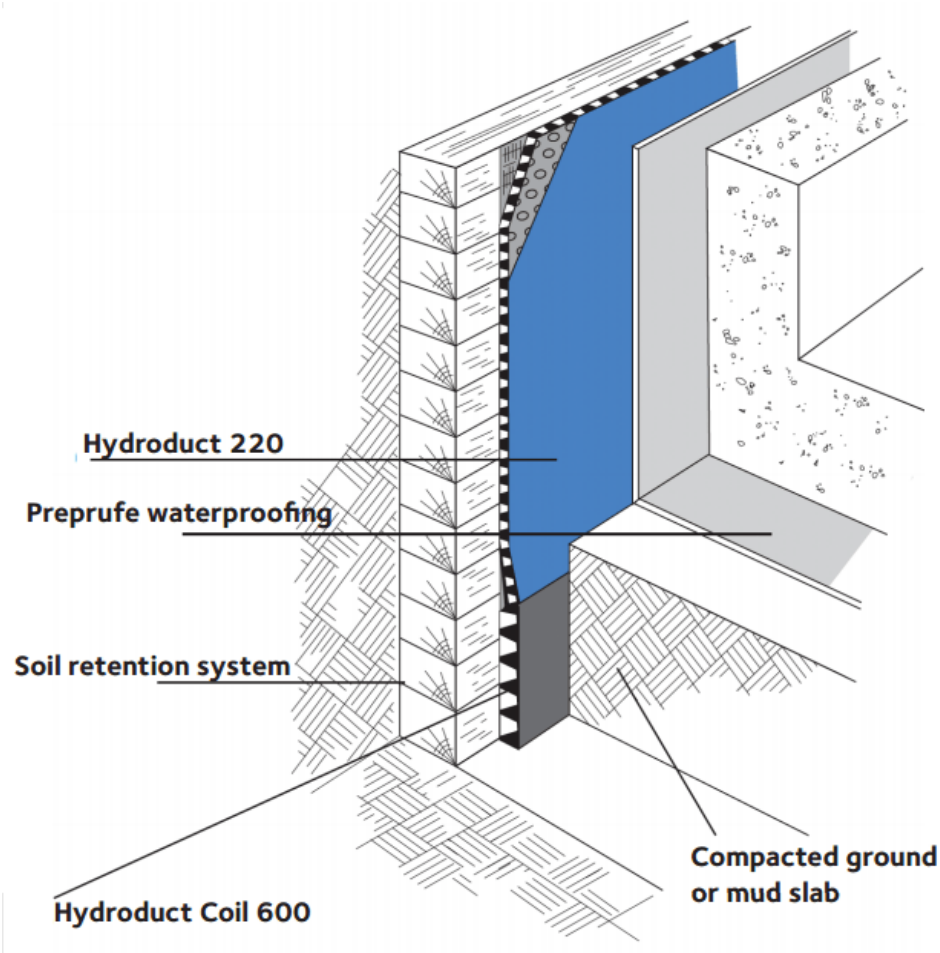
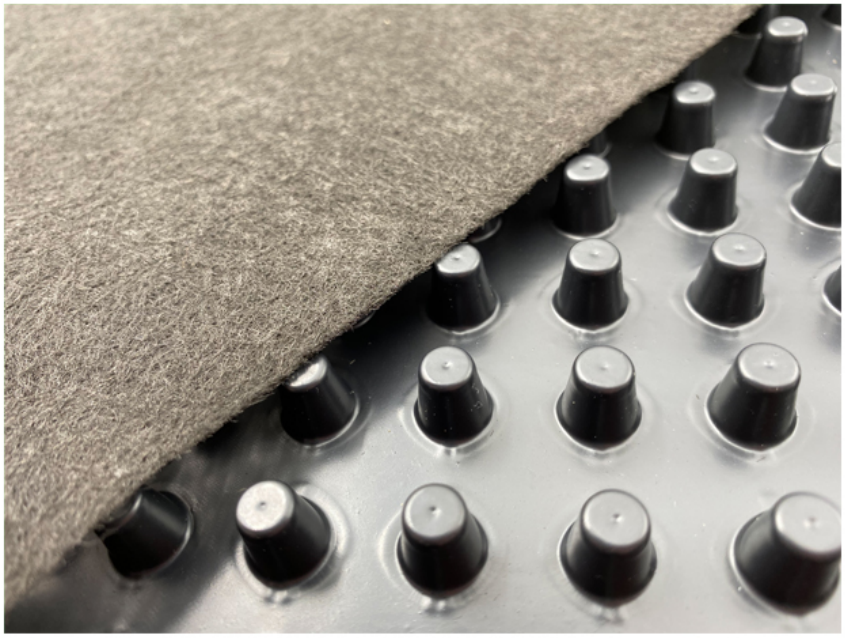
HYDRODUCT® 220

Drainage composite for use as a combined drainage and protection layer with GCP waterproofing membranes

Product Description

HYDRODUCT® 220 is a strong, preformed 0.44 in. (11 mm) thick geocomposite drainage sheet system, comprising a hollow studded polypropylene 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® 220 is designed primarily for use with waterproofing materials in vertical installations.

HYDRODUCT® 220 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 protects the membrane from damage and minimizes the build-up of percolated surface 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.

HYDRODUCT® 220 has been designed to withstand ground pressures and the compaction forces of wet concrete to maintain a high water flow capacity. The drainage sheet must be connected into the site drainage system to minimize hydrostatic build-up and collect infiltrated water using HYDRODUCT® Coil 600. Traditional perforated pipes can also be used wrapped and linked with the geotextile filter fabric to prevent clogging.

While HYDRODUCT® 220 is designed primarily for use in vertical installations, it can be used in specific pedestrian walkways applications, where the load will not exceed 15000 psf.
For any other horizontal application, regardless of the type of overburden, it is recommended to use HYDRODUCT® 660.

Product Advantages

- 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
- Convenient drainage and protection layer—serves as robust membrane protection and drainage
- Geotextile fabric filter—allows ground water to pass into the drain core while restricting the movement of soil particles
- High flow capacity
- Rot proof—unaffected by permanent immersion in water, bacteria, dilute acids and alkalis
- 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, 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 such as PROCOR® or BITUTHENE® and should not be removed. In vertical applications, HYDRODUCT® 220 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.

When adhering HYDRODUCT® 220 directly to BITUTHENE® waterproofing membranes, PREPRUFE® Detail Tape should be used. When using PREPRUFE® Detail Tape, press firmly to ensure good adhesion.

Substrate and job site conditions will determine the attachment pattern. Additional consideration should be given in high wind exposures. Abut adjacent rolls with excess fabric overlapping in shingle fashion.

For inside and outside corners, about 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® 220 Drainage Composite 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® 220 around protrusions, apply PREPRUFE® Detail Tape around the protrusion in a picture frame configuration. Cut HYDRODUCT® 220 to fit snugly around the protrusion. Press the cut edge firmly into PREPRUFE® Detail Tape.

HYDRODUCT® 220 should be covered promptly. Do not leave HYDRODUCT® 220 exposed to sunlight for more than two weeks.

Motor vehicles, construction equipment or other trades should never be allowed directly on the HYDRODUCT® 220. This point should be carefully considered in case of pedestrian walkways applications (up to 15000 psf).

Supply

HYDRODUCT®	
COMPLIMENTARY MATERIALS	
Roll size	4 ft x 50 ft (1.2 m x 15.2 m) 200 ft^2 (18.6 m^2)
Packaging	6 rolls/pallet
Weight	39 lbs (17.7 kg)/roll
PREPRUFE® Detail Tape	2 in. x 50 ft (50 mm x 15 m) rolls

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
DRAINAGE CORE		
GEOTEXTILE	**TYPICAL VALUE**	**TEST METHOD**
Thickness	0.40 in. (10 mm) nominal	ASTM D1777
Compressive strength	15,000 lbs/ft^2 (718 kPa)	ASTM D6364
Flow rate (gradient 1.0,)	18 gal/min./ft (224 L/min./m)	ASTM D4716
Tensile strength	100 lbs (445 N)	ASTM D4632
Apparent opening size	70 U.S. sieve (0.21 mm)	ASTM D4751
Flow rate	165 gal/min./ft^2 (6724 L/min./m^2)	ASTM D4491
CBR puncture	275 lbs (1.23 kN)	ASTM D6241

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