

# AQUADRAIN® G25

## SUBSURFACE GEONET DRAINAGE COMPOSITE

### DESCRIPTION

AQUADRAIN G25 is a three-part prefabricated drainage and protection composite consisting of a high strength HDPE geonet core with nonwoven polypropylene filter fabrics bonded to both sides. AQUADRAIN G25 is designed for horizontal and vertical applications requiring very high compressive strength properties with low to moderate flow properties.

The HDPE geonet core provides high compressive strength and a moderate water flow. The 4-oz non-woven fabric allows water, or other liquids, to pass into the drainage core while restricting the passage of soil particles. The filter fabric is bonded to the core to minimize fabric intrusion into the core resulting from backfill pressure. The HDPE core resists chemical attack and degradation in soil. The heavy 6-oz nonwoven geotextile backing makes it ideal for use with waterproofing materials to functional also as an extra protection layer.

### APPLICATIONS

AQUADRAIN G25 is a cost-effective drainage sheet designed to replace or complement aggregate drainage. It is designed primarily for horizontal sub-surface applications requiring a high compressive strength and low to moderate flow capacity. Applications include foundation walls, retaining walls, bridge abutments, split-slab decks, tunnels, greenroofs and other earth-covered structures. AQUADRAIN G25 can also function as a protection course when installed over a waterproofing membrane.

### INSTALLATION

Install AQUADRAIN G25 with the heavy 6-oz geotextile side against the waterproofing membrane; the 4- oz filter fabric side outward toward direction of expected water flow.

For horizontal installations install G25 with the heavy 6-oz geotextile facing down. Butt or slightly overlap roll edges to form a continuous drainage layer. Lap filter fabric and use adhesive or tape to bond adjacent fabrics in accordance with manufacturer's installation instructions.

Do not drive motorized vehicles directly on drain board prior to topping material being placed. Other trades should be careful not to damage or displace the drainage system prior to topping material placement.

On foundation walls the product rolls may be installed horizontally or vertically oriented. Simply overlap the drain sheet edges in a manner similar to the way roof shingles work shedding water to the outside.

For attaching the drainage composite to waterproofing membrane, concrete or wood, several methods may be used including washer-head fasteners, general construction adhesive, double-sided tape, wood lathing or insulation stick pin anchors. Discuss material compatibility with waterproofing supplier before using mechanical fasteners or adhesives. To attach drain sheet to bare earth, use 4"-8" (100mm-200mm) soil anchor pins with washers.

Cut drain composite as required to fit around penetrations and other details. Always seal open core edges with filter fabric flap or other applicable material including cut core edges around penetrations.

Extend AQUADRAIN G25 installation to 6" (150 mm) below the finished grade line. Wrap excess filter fabric flap behind the core edge at the top of the wall, and any system termination to prevent soil intrusion. Backfill with compacted soil directly against the filter fabric.

### PACKAGING

AQUADRAIN G25 is available in 4' x 50' rolls 200 sq ft per roll; individually packaged in a plastic bag.



AQUADRAIN G25 composite with top side filter fabric removed to show HDPE geonet core

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TECHNICAL DATA			
PROPERTY	TEST METHOD	TYPICAL VALUE	METRIC VALUE
<b>NONWOVEN G+FILTER FABRIC PROPERTIES</b>			
Material	N/A	Polypropylene	Gray Polypropylene
Weight	ASTM D3776	4.0 oz/yd <sup>2</sup>	6.0 oz/yd <sup>2</sup>
Grab Tensile	ASTM D4632	100 lbs (.45kN)	160 lbs (.712kN)
CBR Puncture	ASTM D6241	250 lbs (1.113kN)	450 lbs (2.0kN)
Apparent Opening Size	ASTM D4751	70 U.S. sieve (.212mm)	80 U.S. sieve (.18mm)
Flow Rate	ASTM D4491	140 gpm/ft <sup>2</sup>	110 gpm/ft <sup>2</sup>
<b>DRAINAGE CORE PROPERTIES</b>			
Material	N/A	HDPE	HDPE
Thickness	ASTM D1777	0.25 inch	6.35 mm
Compressive Strength	ASTM D1621	40,000 lbs./ft <sup>2</sup>	1,915 kNm <sup>2</sup>
<b>DRAINAGE COMPOSITE PROPERTIES</b>			
Flow Capacity (HG = 1)	ASTM D4716	8.5 gpm/min/ft.	106 l/min/m
Roll Length	N/A	50 ft.	15.24 m
Roll Width	N/A	4 ft.	1.22 m
Roll Weight	N/A	55 lbs.	

AQUADRAIN published flow performance and load values are determined by applicable industry testing methods. Specific project performance requirements and product selection should be determined by the project designer. Do not drive vehicle directly on drainage composite prior to concrete or backfill placement. Repair damaged or disrupted drainage system prior to backfill or cover material placement. Product should not be used as a surface material exposed to sunlight. AQUADRAIN is resistant to chemicals found in normal soil conditions. Additional geotextile filter fabric may be required for use around discharge pipes and other detailing.

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