

# AQUADRAIN 8MM

## SUBSURFACE DRAINAGE COMPOSITE

### DESCRIPTION

AQUADRAIN 8MM drainage composite is a two-part prefabricated sheet drain consisting of a 3-dimensional HDPE formed dimple core covered with a non-woven polypropylene filter fabric bonded to one-side. The formed dimple core provides compressive strength and collects water for flow to drainage discharge pipes.

The filter 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 each dimple to minimize fabric intrusion into the core resulting from backfill pressure. The HDPE core resists chemical attack and degradation in soil.

### APPLICATIONS

AQUADRAIN 8MM is a cost-effective drainage sheet designed to replace or complement aggregate drainage backfills. It is designed primarily for vertical sub-surface applications requiring moderate compressive strength and flow capacity. Applications include foundation walls, retaining walls, bridge abutments, planters, tunnels and other earth-covered structures. AQUADRAIN 8MM can also function as a protection course when installed over CETCO waterproofing membranes.

### INSTALLATION

Install AQUADRAIN 8MM with the plastic core toward the structure; filter fabric side outward toward direction of expected water flow. Product rolls may be installed horizontally or vertically oriented. For attaching the drainage composite to waterproofing membrane, concrete or masonry, several methods may be used including washer-head fixings, gen-

eral construction adhesive, double-sided tape, wood lathing or insulation stick pin anchors. Discuss material compatibility with CETCO before using mechanical fixings or adhesives. To attached drainage sheet to earth faces, use 100 mm – 200 mm soil anchor pins with washers.

AQUADRAIN 8MM may be installed starting at the bottom or top of the wall. Starting at the base of the wall, install the first course of AQUADRAIN 8MM with the bottom edge positioned over the drainage take-off pipe. Unroll the AQUADRAIN 8MM rolls and position over the adjacent sheet edge approximately 150 mm. Peel back the geotextile top layer on the edge of the adjacent sheet approximately 150 mm and press down the overlapping plastic core section firmly, to embed the upper layer of dimples onto the lower layer dimples.

Another installation technique is to simply overlap the drain sheet edges a minimum 150 mm in a manner similar to the way roof shingles work shedding water to the outside. Either method requires the filter fabric edge flap to cover roll lap joints and secured with CETSEAL or duct tape. 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.

Where conventional land drain or discharge pipes surrounded by gravel are to be used, position the drain core between the land drain / discharge pipe and the structure and wrap underneath and round the land drain / discharge pipe. Alternatively, wrap the gravel

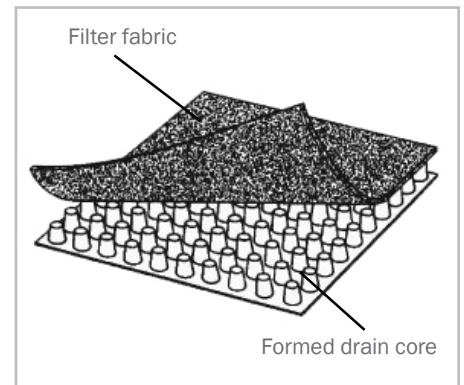
drainage channel with a geotextile to prevent soil filtration into the land drain / discharge pipe.

Extend AQUADRAIN 8MM installation to 150 mm below the finished ground level 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.

For installation against property line retention walls, place AQUADRAIN 8MM with the filter fabric side facing outward against the retaining wall. Follow installation techniques described above. Then place waterproofing or pour structural concrete directly against the drain core.

### PACKAGING

AQUADRAIN 8MM is available in 2 m x 20 m rolls; 40 sqm per roll.



## AQUADRAIN 8MM SUBSURFACE DRAINAGE COMPOSITE

TECHNICAL DATA				
<b>FILTER GEOTEXTILES</b>				
Raw material	Polypropylene			
Weight	EN ISO 9864	g/m <sup>2</sup>	100	±10
Tensile strength MD/CMD	EN ISO 10319	kN/m	6	-2
Extension at max load MD/CMD	EN ISO 10319	%	> 45	
CBR puncture resistance	EN ISO 12236	N	1000	-175
Cone drop test	EN ISO 13433	mm	38	+8
Water permeability	EN ISO 11058	mm/s	100	-35
Opening size	EN ISO 12956	micron	90	±35
<b>DRAINAGE CORE</b>				
Raw material	HDPE			
Weight	EN ISO 9864	g/m <sup>2</sup>	500	
Width		m	2-4	
<b>GEOCOMPOSITE</b>				
Weight	EN ISO 9864	g/m <sup>2</sup>	600	±50
Thickness at 2 kPa	EN ISO 9863-1	mm	7,5	±1
Tensile strength (MD/CMD)	EN ISO 10319	kN/m	10/10	-2
Elongation at max load (MD/CMD)	EN ISO 10319	%	50/55	±15
Compression resistance	EN ISO 25619-2	kN/m <sup>2</sup>	150	±30
<b>HYDRAULIC PERFORMANCES</b>				
Plane flow capacity MD (20kPa, S/R, i=1)	EN ISO 12958	l/(m-s)	1,65	±0,2
Plane flow capacity MD	EN ISO 12958	l/(m-s)		±20%
Hydraulic gradient	Contact	i = 0,04	i = 0,10	i = 1
Load: 20 kPa	S/R	0,30	0,45	1,65
Load: 50 kPa	S/R	0,20	0,35	1,30
Load: 100 kPa	S/R	0,15	0,20	0,80
S/S contact Soft/Soft S/R contact Soft/Rigid				
<b>DURABILITY</b>				
Forecast of minimum durability (natural soils 4 < pH < 9 and T < 25°C)		years 5		
Product to be covered within 2 weeks after installation				
<b>STANDARD DIMENSIONS</b>				
Width		m	2	±3%
Length		m	20	±2%
Rolls/pallet		No.	6	



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