

FreDrain® Strip Filter Drainage

Product Images





Short Description

A strip filter composite drain and collection solutions, consisting of a three dimensional, high-flow drainage core, wrapped with a non-woven filtration geotextile.

Description

PREFABRICATED HDPE DRAINAGE STRIP FILTER

FreDrain® Strip Filter is a composite drain and collection system consisting of a three-dimensional, high-flow drainage core that is wrapped with a non-woven filtration geotextile.

FreDrain® is designed to replace conventional sand or gravel-covered pipe drains by providing a far greater surface area for water to pass, resulting in faster more efficient drainage.

Available in 100mm, 200mm and 300mm depth, either 25 or 40mm thick and comes in 50m Rolls. A full range of fittings is available with the system for fast and easy installation.

ADVATAGES OF FREDRAIN® STRIP FILTER

The most important characteristic of any subsurface drainage system is its ability to collect drain water from the surrounding soil. Conventional pipe and stone systems have major limitations when compared to FreDrain® Strip Filter. The open area in FreDrain® Strip Filter (60%) far exceeds that of a perforated pipe (1.1%) and rigid strip filters (2.5%).

- Lower installed cost – Combined installation and material cost is usually less than half of that for aggregate drains.
- Easy to handle and install – Lightweight.
- Reduces drainage system space requirements.
- Strong and durable – Crush strength of core resists damage during installation
- High flow capacity – Structure of core provides multiple channels for vertical and horizontal water flow.

Geotextile filter fabric permits high volume of water into core while restraining soil.

APPLICATIONS

- Subsoil drains in roads, railways, sports field and building foundations.
- Behind shotcrete walls, between concrete piles, tunnels and embankments.
- Mining industry for slope drainage, dewatering tailings.

INSTALLATIONS INSTRUCTIONS – SUB SOILS INSTALLATION

- Trenching: Dig a 50-100mm wide trench using a standard trenching machine. The trench should be approximately 75mm deeper than the width of the FreDrain® Strip Filter used.
- Installation: Place the FreDrain® Strip Filter in the trench to fit against the side of the trench and at the bottom of the trench. Backfill trench with coarse sand or fine gravel to avoid settlement.
- Joining: FreDrain® Strip Filter can be joined together by one of the following methods:
 - A. Splice the joint by folding back the filter fabrics approximately 100mm from the ends of the rolls to be connected. Interlocking 2-3 rows of core dimples and fold the fabric back over the connection. Secure the splice connection with duct tape.
 - B. Couplers are available for FreDrain® Strip Filter. Slide one end of the drain into each side of the connector. Secure fitting to FreDrain® Strip Filter using duct tape.
- Tee Connectors: FreDrain® Strip Filter can be installed with branch lines to cover larger surface areas. Tee connectors are used to join straight and branch lines of strip drain together. Place the end section of each branch line 50mm into the tee connector and secure it with duct tape. Use the stop guidelines on the fitting to ensure the drain inside the connector maintains an open area for water flow.
- Outlet Connectors: Outlet connections are used to transition the collected water from the FreDrain® to a 100mm PVC or corrugated HDPE pipe.
 - A. End outlets are available for 300mm FreDrain® Strips. Also available universal end outlets can be used for all FreDrain® widths.
 - B. Universal tee outlets can be used with for all FreDrain® widths.
 - C. Side outlets are available for 300mm FreDrain® Strips. Also available are universal side outlets to be used for all FreDrain® widths

DOWNLOADABLE RESOURCES

[FreDrain® Strip Filter Drainage - Product Spec Sheet](#)

[FreDrain® Strip Filter Drainage - Case Study](#)

SPECIFICATIONS

HDPE Core Properties	Unit	25	40
Compressive Strength (ASTM-1621)	kPa	>200	>200
Minimum Stiffness (RMS 3556)	mm	>11.0 for width 200 - 400mm	
Thickness (ASTM-1777)@ 4mm deflection	mm	25	40
Flow (ASTD-4716) i=1.0 l	/min/m	110	130
Material	-	HDPE	
Core Profile	-	Raised Cups both sides	
Roll Length	m	50	50

Roll Width	m	100, 200, 300	
Roll Weight	kg	18, 35, 54	26, 52, 78
Geotextile B1 Properties			
Flow (AS3706.9)	l/m2/s	>150	>150
EOS (AS3706.4)	mm	< 0.12	<0.12
G Rating	-	>1350	>1350
Tear	N	>250	>250
Grab (AS3706.2)	N	>500	>500

Additional Information

CODE	30-SD-WP
U.O.M	Each
Brand	GEOmasta
Material	Geo-Textile

Product Options

Width:	100 mm
	200 mm
	300 mm

