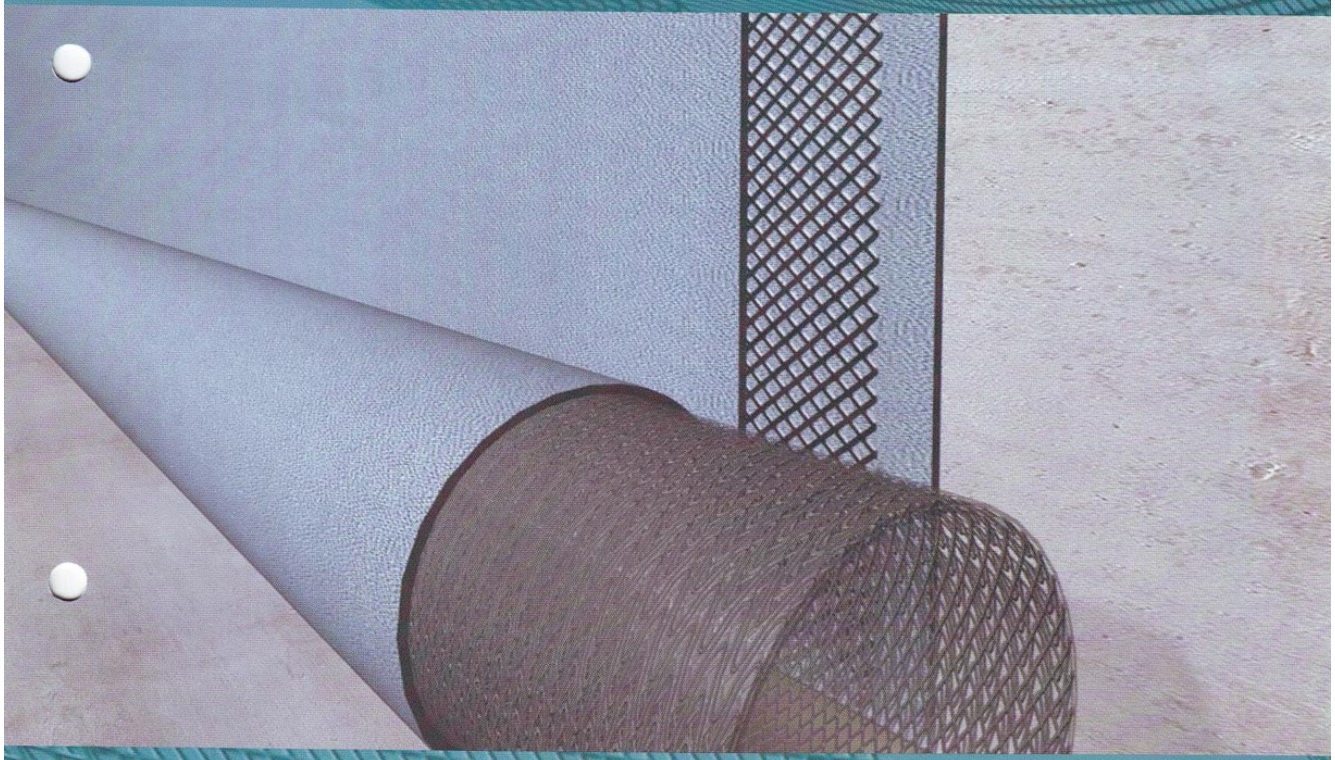
GEOSYNTHETICS

Flo-Drain

The ready-made solution to sub-soil drainage

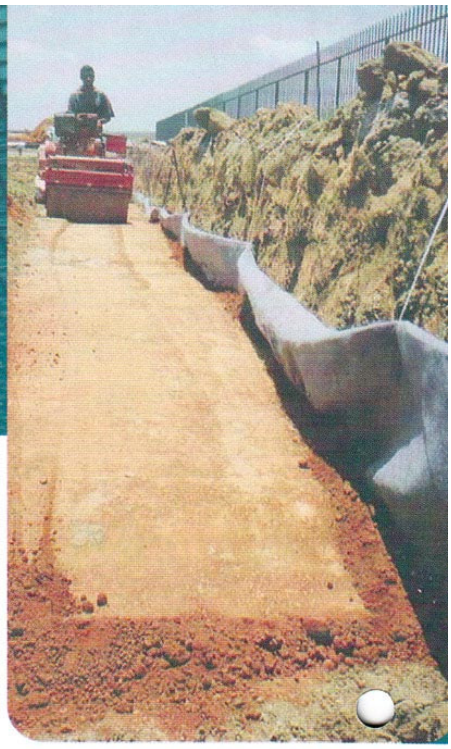


KAYTECH
ENGINEERED FABRICS

Jhb: Tel +27 (0) 11 879 8400 | Fax +27 (0) 11 452 1983
CT: Tel +27 (0) 21 531 8110 | Fax +27 (0) 21 531 5498
KZN: Tel +27 (0) 31 717 2300 | Fax +27 (0) 31 702 0435

WEB: www.kaytech.co.za

Flo-Drain



The ready-made solution to sub-soil drainage

Most road, railtrack and slope failures can be attributed to the presence of sub-surface water. With increasing costs of transport, labour and suitable aggregate, there is a need for a more economical sub-soil drainage solution.

Applications

The Flo-Drain can be successfully used in the lowering of the water table or intercepting seepage in a wide range of applications.

- Roadside edge drains
- Railtrack formation edge drainage
- Sportsfields, golf courses, tennis courts and bowling greens
- Behind retaining walls and bridge abutments
- Behind flexible retaining wall structures
- Around buildings and structures
- Courtyards, embankments and driveways
- Agricultural lands

Advantages

Many important advantages can be provided when deciding whether to use a conventional aggregate drain or a pre-manufactured Flo-Drain system in any application.

Economic Considerations

- Material costs influenced by:
  - availability of good quality natural drainage materials
  - cost of material and transport
  - ease of handling and placing
  - wastage of drainage material
- Excavation costs
- Reduced trench widths
- Suitable selected backfill being available
- Removal of spoil
- Supervision

Design Considerations

(For effective draw down of the phreatic surface)

- Depth of drain
- Frequency (spacing)
- Permeability of the soil

Practical Considerations

- Site access
- Soil conditions
- The use of trenching equipment
- Speed of installation
- Confined areas
- Resistant to biological action and most chemicals

Benefits

- Prefabricated system
- Ease of installation
- Flexible system
- Lightweight product
- Quality assurance

On site assembly and installation

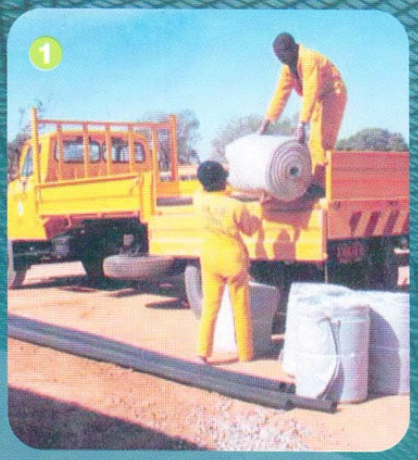
See adjacent photographs 1, 2 and 3 for assembly.

1. The Flo-Drain fin is supplied pre-assembled (Geopipe separately).
2. The Geopipe is positioned at the base of the fin, solid channel down, and the geotextile flap firmly secured around it, joined by means of wire, twine or stapling.
3. The Flo-Drain is placed vertically into the trench. With selected fill, set the Flo-Drain against the downstream face of the trench.

   With unselected fill set the Flo-Drain against the upstream face.

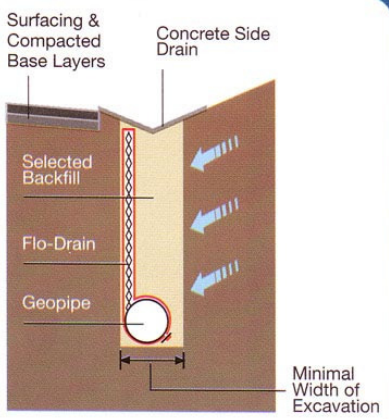
Backfill must be well compacted in layers. Backfill must be a well-graded, free-draining material.

Flo-Drain Assembly

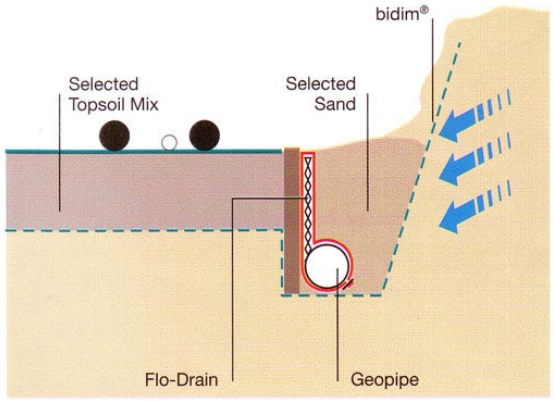


Flo-Drain Application Diagrams

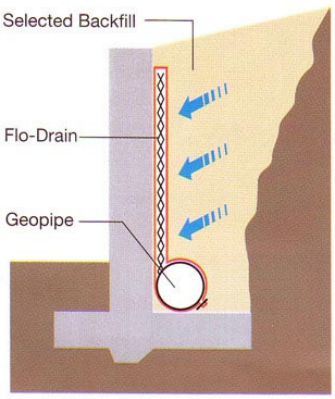
Roadside



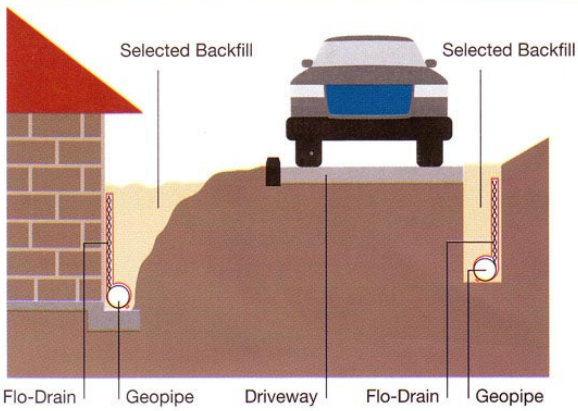
Sportsfields



Retaining Wall

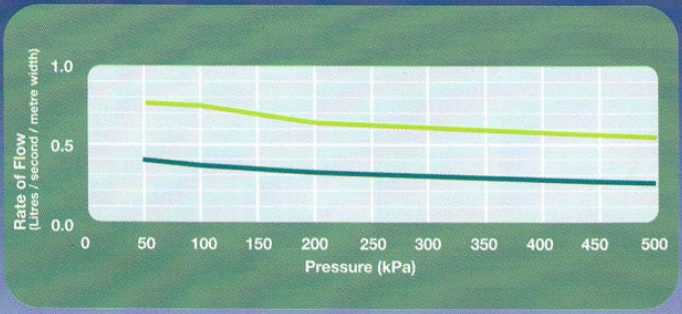


Domestic



Specifications

Flow Capacity of Flownet Composite
EN 12958



Flownet 500 HP - Machine Direction
Flownet 500 HP - Across Direction

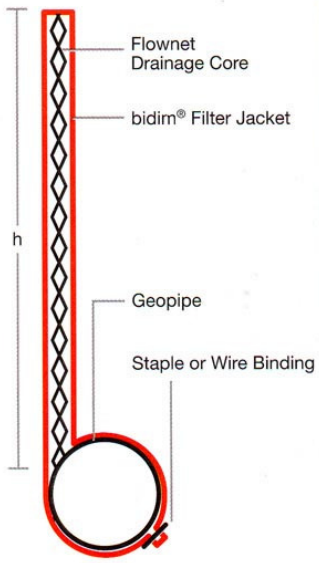
with bidim® A2 both sides between rigid platens

Test sample length (l) = 300 mm

Water Head (h) = 300 mm

Hydraulic Gradient (i) = h/l = 1

Cross Section



Flownet 500 HP

Constituent Polymer	HDPE	F 7650
Vicat Softening Point (°C)	70	ISO 306
Tensile Yield Strength (MPa)	21	ISO 5772
Maximum Service Temperature (°C)	85	
Overall Thickness (mm) @ 2 kPa	4.0	
Weight per unit area (g/m²)	500	
Tensile Strength (kN/m)	MD	5.3
	AD	3.0
Mesh Angle (degrees)	55	

Chemical Resistance: Resistant to most chemicals and organisms normally encountered in natural soils or when immersed in fresh or salt water.

Geotextile Filter Jacket

A continuous filament needle punched nonwoven polyester geotextile. For detailed specification consult **"Geotextile Filter Design Guide", (2007).** The document is available from your Kaytech representative.

Flo-Drain Sizes

Standard Height (h)	Between 400 mm and 2000 mm
Length of Roll	30 m

Contact your Kaytech Representative

Geopipe

70 % of the Geopipe surface area is perforated, giving unmatched infiltration capacity.

All the components of the Flo-Drain are manufactured in South Africa