

INFRADRAIN STRIP FILTER DATASHEET

InfraDrain® Strip Filter is a fully-filtered prefabricated drain and collection system consisting of a three dimensional, high-flow drainage core, wrapped with a non-woven filtration geotextile. InfraDrain® is designed to meet the specific needs of shotcrete drainage for building foundations and basements, bridge abutments, road tunnel linings (especially in rock), retaining walls, drainage behind facings to bored piles and diaphragm walls and runoff from footpaths, cycleways and verges.

In shotcreting applications, the InfraDrain® intercepts seepage and transmits water into the core. When used for subsurface drainage behind shotcrete walls InfraDrain® Strip Filter reduces the hydrostatic pressure against a wall or slab, maintains the structural integrity of the wall from grade to footer and reduces piping and erosion behind the concrete wall.

InfraDrain® is available in widths 100mm, 200mm and 300mm. The 50m long rolls are lightweight and easily handled in difficult access conditions.

PROPERTIES

Core Properties	Units	25	40	Geotextile B1 Properties
Compressive Strength (ASTM1621)	kPa	> 200	> 100	Flow (AS3706.9) > 50m ² /s
Minimum Stiffness (RMS 3556)		> 11.0 for width 200 - 400mm		EOS (AS3706.4) < 0.12 mm
Thickness (ASTM-1777) @ 4mm deflection	mm	25.0	40.0	G rating > 1350 Tear > 250N
Flow (ASTD-4716) i = 1.0	l/min/m	110	130	Grab (AS3706.2) > 700 N
Material		HDPE	PVC	
Core Profile		Raised Cups both sides		
Roll Length	m	50	50	
Roll Width	mm		100 / 200 / 300	
Roll Weight	kg	18 / 36 54	26 / 52 / 78	



WHY USE OUR INFRADRAIN?

The most important characteristic of any subsurface drainage system is its ability to collect water from the surrounding soil. Pipe and stone systems have major limitations when compared to InfraDrain® Strip Filter. InfraDrain® has a much greater infiltration area (95%) than competing conventional round or panel type (2.5%) subsurface drainage systems. Panel type strip filters, such as Megaflo, were designed for use as pavement edge drains.

Flexible cusped strip filter drains are designed to collect significantly more seepage at a lower hydraulic gradient from the surrounding soil than rigid panel strip drains.

The simplicity of the systems allows the use of narrow trench profiles for conventional drainage systems through to very flat projections when used in shotcrete applications or drainage of slopes to improve stability.

When used for shotcrete applications, the high compressive strength of Infra strip drains withstand both installation stresses and to deliver long-term performance. The geotextile coated dimples provide an excellent surface for the adhesion of shotcrete and other construction materials. Reduced shotcrete rebound (up to 20%) compared to rigid, panel type strip drains saves money during spraying.



OTHER BENEFITS OF INFRADRAIN

- 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.



INFRADRAIN INSTALLATION

Infradrain is installed vertically in applications where full wall coverage is not practical due to protrusions in the wall surface, such as soil nails.

The flexible strip drain is placed firmly against the shoring surface (soil/lagging/shotcrete/soil nailing/etc.). The spacing of the “chimney drains” depends on factors such as the width of the strip drain, the hydrostatic pressure and shotcrete coverage, and will be determined by a hydraulic engineer.

To ensure good contact with the soil or rock face, the flexible strip drain is secured by pins driven through the drainage strip and into the ground behind.

Standard and specialised connectors and outlets transition the collected water from the strip drain to round, smooth wall, PVC or corrugated HDPE pipe. It is essential that outlet fittings and pipes are not crushed and kept free from debris.