

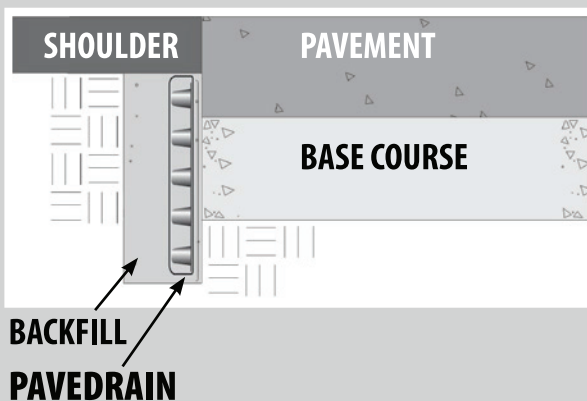


Global Synthetics
Australian Company – Global Expertise

PAVEDRAIN®

Highway Geocomposite Edge Drain

TYPICAL HIGHWAY PAVEDRAIN DETAIL



PAVEDRAIN® - PRODUCT SPECIFICATIONS

General

Pavedrain® is a proprietary product consisting of a flexible geocomposite plastic strip filter cusped core encased in a geotextile filter forming part of the structural composite.

Pavedrain® core is manufactured from virgin HDPE that has proven to be a long lasting durable polymer over decades of construction use. The core has a cusped profile for the efficient discharge of water whilst maintaining good structural integrity during placement and service conditions. The core has high compressive strength with minimal deflection under load.

Attached to the core is a nonwoven geotextile filter that is fully compliant with the requirements of MRTS 27 Strength Class B – Filtration Class I & RMS R63 Strength Class B -Filtration Class I. The geotextile is seamed by gluing and is attached to the plastic core with water insoluble glue, adhering each cusp and the flat or bottom side of the core to the geotextile wrap. This method of attachment of the geotextile to the core provides significant additional stiffness to the product and minimises potential issues with “J”-ing and bending. The complete product complies with the specification requirements of MRTS 38 Department of Transport and Main Roads (QLD).

The geotextile filter is composed of 100% synthetic fibres which are needle punched into a stable, high density network of fibres. The geotextile is made from polypropylene fibres and is unaffected by fungi, bacteria and is resistant to naturally encountered soil acids and alkalis.

Physical & Performance Properties of Pavedrain®

Pavedrain®			
General Properties	Test Method	Unit	Value
Core Polymer	Manufacturer QA	Polymer	HDPE – Note 1
Core Thickness	ASTM D1777	mm	>25 – Note 2
Pavedrain® Depths	Manufacturer QA	mm	150, 300, 450- Note 2
Pavedrain® Roll length	Manufacturer QA	m	50.3
Percentage Open Area of Pavedrain®	Manufacturer QA	%	10 – Note 1
Geocomposite Performance Properties	Test Method	Unit	Value
Flow Capacity @ 200kPa confining pressure and 0.5 hydraulic gradient	ASTM D4716	l/min/m	>300- Note 1
Horizontal Compressive Strength @ 20% deflection	ASTM D2412 & ASTM D1621	kPa	>200 Note 1
Change in Core Area at nominated load of 157 kPa	ASTM D6244	% loss of cross sectional area	<5 Note 1

Note 1 The values quoted are fully in accord with the requirements of the specification values of MRTS 38 – Transport and Main Roads (QLD) and are consistent with the use of the 300mm product.

Note 2. Height and thickness is subject to ± 5% tolerance in accord with specification MRTS38.

Pavedrain® Geotextile Properties				
Mechanical Properties	Test Method	Units	MRTS 27 and RMS R63 Requirements	Pavedrain® Geotextile Property (Characteristic Q Value) Note 3
Elongation	AS3706.4	%	>30	>30
Grab Tensile	AS3706.2	N	>700	>700
Trapezoidal Tear	AS3706.3	N	>250	>250
G Rating	Austrroads	-	>1350	>1350
Filtration Properties				
Flow Rate	AS3706.9	l/m ² /sec	≥ 50	≥ 50
Permittivity	AS3706.9	s ⁻¹	≥ 0.5	≥ 0.5
EOS _{0.95}	AS3706.7	microns	≤120	≤120

Note 3 The geotextile properties quoted are in accord with MRTS 11.27. This specification is the minimum property requirement for the geotextile used for Pavedrain® drain type under MRTS 38 - Transport and Main Roads (QLD).

Applications

A wide range of applications including Highway edge drains, golf green and fairway drainage, sports field drainage, building foundations and retaining structures, waste management drainage structures for landfills and in fact most applications where ground water needs to be intercepted, collected and then transported to discharge.

Features

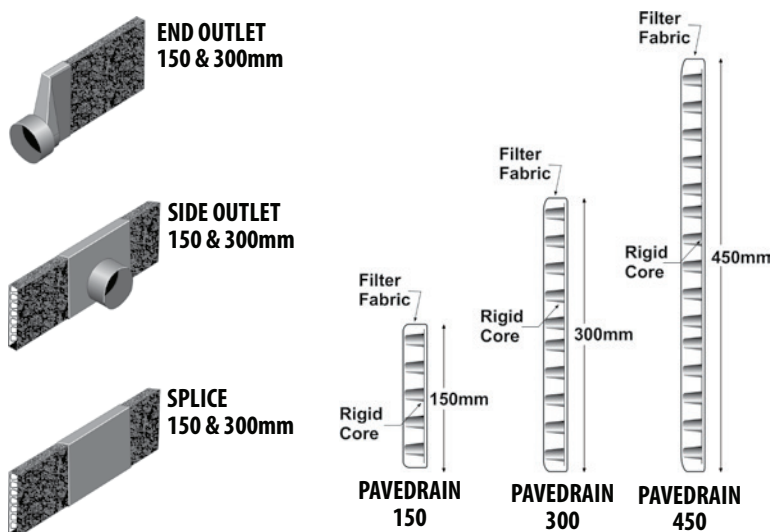
- Proven HDPE polymer technology
- Narrow product width for narrow trench
- Composite product
- High crush strength
- Fully encapsulated core

Benefits

- Excellent infiltration capacity
- Minimal cover requirements
- Efficient installation costs
- Ease of connection one roll to another using standard detail
- Durable product
- Unique geotextile attachment adding to dimensional stability
- Compliance with local Roading authority drainage specification

Fittings and Standard Pavedrain® Profiles

A range of fittings is available to suit most typical applications of Pavedrain® and to suit the standard 150 and 300 Pavedrain® profiles.



Installation

While actual installation procedures are specific to each site there are some general guidelines that may assist in successful installation of the Pavedrain® product.

- Step 1. Locate area that requires drainage and determine direction and layout of drainage system to fall.
- Step 2. Excavate the trench to the required depth and width ensuring that long term cover requirements from the surface to top of Pavedrain® will be satisfied. Generally cover depth will be in the range of 100 to 300mm dependent upon the anticipated loadings and application.
- Step 3. Locate the Pavedrain® within the trench vertically and ensure that the Pavedrain® is placed against the side of the trench from which the infiltrating water is being drained. Where flow is being drained from both sides of the trench, then place the Pavedrain in the trench centre. During the positioning and placement operations of the Pavedrain® and backfill operations, a simple staking process may need to be employed such that the Pavedrain® position is maintained. After backfill operations such positioning stakes shall be removed.
- Step 4. Make all necessary connections and outlets for the Pavedrain®.
- Step 5. Backfill around the Pavedrain® with a free draining compactable material such as a well graded, clean washed sand or gravel. Generally place in 150mm lifts and compact to specified levels. No fines concrete is commonly used as the drainage media as well as providing significant structural support in applications of high traffic volume such as highway edge drain treatments.



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