

Rapid-Drain

Sub-Surface Drainage & Membrane Protection Sheet

Description

Rapid-Drain is an efficient, filtered sub-soil drainage system for drainage of all in-ground structures. It comprises a highly compression resistant and flexible studded structural plastic core bonded to heavy-duty, non-woven polypropylene filter fabric.

Uses

Rapid-Drain is specifically designed for use with all Chemind waterproofing membrane systems as well as Grace Bituthene[®] and Preprufe[®] sheet membranes.

It provides uninterrupted, permanent high flow drainage to lift pits, basement retaining walls, bridge abutments, planter box walls and floors. Rapid-Drain is used to collect and control water under landscaped podium decks, terraces or roofs.

Features

- High compressive strength studded core accepts structural and traffic loads, while allowing uninterrupted water flow.
- Reduces hydrostatic pressure build-up behind structures such as retaining walls, basements and foundations.
- Reduces the potential for damage caused by movement and expansive soils.
- Provides membrane protection to walls and floors in planter boxes. Will prevent flooding and deposition of soil and debris on surrounding paved surfaces.
- Easy to install and has an over-locking edge profile to assist with stability of installed drainage systems.
- The free draining structure and geotextile layer prevents silt from clogging footing drainage lines, planter box floor outlets and landscaped deck outlet drains.
- Provided added benefits in facilitating the protective function of the waterproofing membrane system.

Typical Properties

Colour	Black
Core Structure	Moulded HDPE
Geotextile Type	Non-woven synthetic fibre
Fungus Resistance	Excellent
Crush Strength	200 kPa (minimum)
Flow Rate (AS 3706.9)	119 litres/m ² /second
In-Plane Flow Rate (ASTM D4716)	13500 litres/m ² /hour @ 200 kPa (100% grad.)
Composite Thickness	12 mm
Geotextile Puncture Strength	60kg
Trapezoidal Tear Strength (AS 3706.3)	150 N

Preparation

Inspect any applied waterproof membranes to insure they are clean and undamaged.

Damaged areas must be repaired before installing Rapid-Drain.

Surfaces should be generally clean, dry and free of any debris.

Application

Rapid-Drain may be:

- Installed vertically or horizontally to any structure.
- Laid directly to lost formwork or shotcrete behind Grace Preprufe[®] 160 before pouring in-situ concrete walls.
- Laid directly over Grace Bituthene[®] or Chemind membrane systems before backfill, landscape or paving.
- Used in conjunction with geotextile covered foundation drainage line to prevent build-up of hydrostatic water pressure on tanking membrane.

Installation

- Install Rapid-Drain sheet with geotextile towards the source of water.
- Cut Rapid-Drain to suit surface profiles and lay carefully over the surface.
- On verticals use Grace Bitustik® Tape adhesive strip, other suitable adhesives or battens, to hold Rapid-Drain in place.
- Pins and other mechanical fasteners must not be used over any waterproof membrane as they may penetrate and cause damage. However, they may be used when no waterproofing is present.

Joining

- Adjacent rolls may be joined by butt joints or by overlapping the cuspations a minimum 50mm.
- Overlap geotextile layer 50 to 100mm minimum and seal lap securely with waterproof tape to prevent any soil infiltration to the studded core.

Sealing Edges

All exposed edges of Rapid-Drain should have geotextile wrapped around the core edge to prevent entry of debris and silt.

Corners

Rapid-Drain can be readily bent on site to form internal corners. External corners are formed by cutting the dimpled core at the corner and providing an extra 100mm wide strip of geotextile to wrap around corner and overlap joint, before bonding with Bitustik® Tape.

Backfilling

A free draining backfill material should be selected to prevent formation of a less permeable barrier than the geotextile. Care should be taken to ensure that damage is not caused to the Rapid-Drain or waterproof membrane during placement.

Finishes

Various finishes can be laid directly onto Rapid-Drain without compromising its performance – concrete paving slabs with optional Roofmate™ insulation, block or brick pavers on sand bed, landscaping and planting.

Packaging

Rapid-Drain is available in rolls 1 m x 25 m and 2 m x 25 m.



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