

Drainage Solutions



We have the solutions because we have the systems

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 **GEOFABRICS®**

Vertical Drainage Solutions

Cordrain™

Cordrain™ is lightweight, easy to install and has been specifically designed to reduce hydrostatic pressure behind structures, reducing the likelihood of structural damage caused by foundation movements in expansive soils.



Application

Basements, retaining walls, bridge abutments, culverts, tunnel lining.

Description

Cordrain™ is a geocomposite vertical drainage blanket, which consists of a plastic cusped inner core (cusped on both sides), fitted with a heat bonded, non woven geotextile filter fabric, (bonded on one side only).

Benefits

- Effectively reduces hydrostatic pressure behind walls
- Provides an airlock between drainage layer and wall
- Assists in the waterproofing of structures
- Reduces the likelihood of structural damage caused by foundation movements in expansive soils
- Cordrain™ typically eliminates the need for aggregate or sand backfill
- Easy to handle, quick to install
- Lightweight and flexible

How it works

Cordrain™ is fitted with a heat bonded non woven geotextile and in the vast majority of soils, the geotextile ensures stable filtration of the adjacent soil.

A soil filter develops within the first few millimetres of soil against the geotextile. As water passes from the original soil into the drain, it washes a few small particles with it for a short period of time after installation.

As the particles are washed through, a bridging network of slightly larger particles builds up against the geotextile.

This network prevents further small particles from being washed through, stabilising the soil and allowing only water to pass through the system. (see Fig 2)

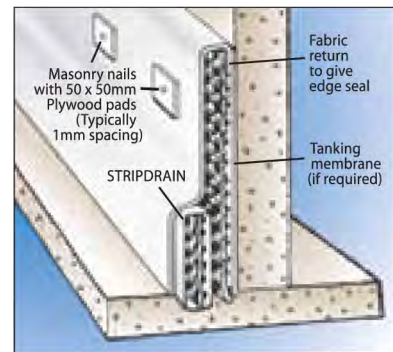


Figure 1. Building basements/cellars (not to scale)

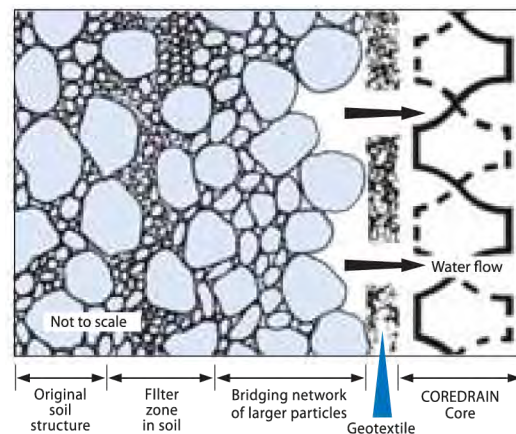


Figure 2. Magnified cross section of Cordrain and soil filter

Product Range

The Cordrain™ range consists of products which will be suitable for most vertical drainage blanket applications.

Product	Thickness	Crush strength	Rec. max soil depth
Cordrain / 1150	12 mm	100 kPa	0-2/2.5 metres
Cordrain / 1200	18 mm	250 kPa	0-10 metres

Note:

- The crush strength stated above for lateral soil pressures in most soils for each given depth when installed vertically.
- An approximate factor of safety of 2:1 has been used to determine the recommended maximum soil depth.
- The above values are a guideline only. It is up to the designer to calculate the insitu backfill properties.
- If required, a product of higher crush strength is available upon request.



Application photo: Copyright Maccaferri (Aust) Pty Ltd

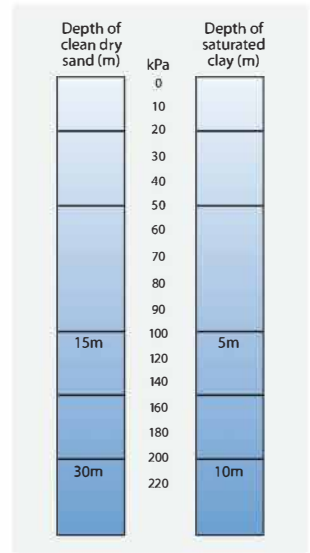
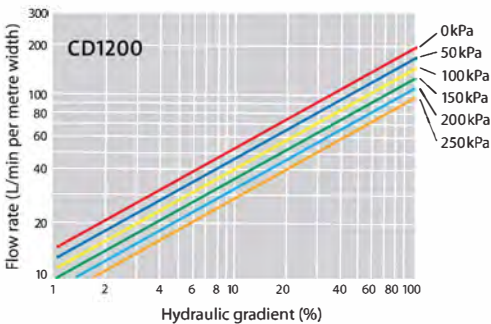


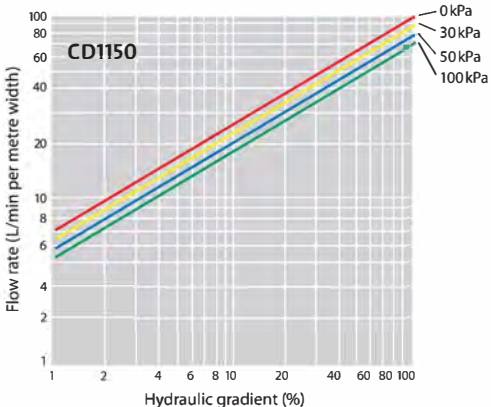
Figure 3. Relationship of lateral earth pressure to depth in soils. (indicative only)

Flow rates Vs Hydraulic Gradient (at various pressures)

Cordrain™ /18



Cordrain™ /12



Product Specifications

Geotextile	CD1200MF	CD1150MF
Non woven heat bonded PET geotextile	Yes	Yes
Core wrap	One side only	One side only
Flow rate -275 litres/m ² /sec @10cm head	Yes	Yes
Plastic Core		
Material	HDPE	HDPE
Core Profile	Raised cusps on both sides (square shaped)	Raised cusps on both sides (square shaped)
Mass (gsm) nominal	900	720
Fungus Resistance	Excellent	Excellent
Colour	Black	Black
Crush Strength (kPa)	250	100
Core Thickness (mm)	18	12
In-plane flow rate/m-width (nominal)	110 litres/min/m	75 litres/min/m
@ Slope	100%	100%
@ Pressure	250 kPa	250 kPa
Geocomposite		
Roll Length (m)	25	30
Packaging	PE bag	PE bag
Width	1200mm	1150mm

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