



Global Synthetics

LEADERS IN **GEOSYNTHETICS** EXPERTISE. ADVICE.

ProDrain® Geocomposite Sheet Drain System

The proven choice for:

ADVANCED DRAINAGE CONTROL



WITH PRODUCT CRUSH STRENGTH AVAILABLE IN EXCESS OF 700kPa

ProDrain® Sheet Drains are a range of geocomposite drainage products formulated from selected polymers to form a stable core and void and then encapsulated with a premium nonwoven geotextile, to provide positive filtration and drainage functions. The ProDrain® sheet drain range replaces the need for traditional aggregate drainage layers in many applications of vertical and horizontal drainage. ProDrain® is a cost effective, proven treatment for drainage problems.

- VERTICAL WALL DRAINAGE
- HORIZONTAL ROOF DRAINAGE
- PLANTER BOX DRAINAGE
- MEMBRANE PROTECTION
- LANDFILL CAP DRAINAGE
- LEACHATE COLLECTION SYSTEM
- HORIZONTAL DRAIN SYSTEMS
- and many applications for liquid collection and management of liquid in a wide range of applications

Description

ProDrain® Sheet Drain System

Global Synthetics supply ProDrain® Sheet Drain in a range of thicknesses from 10mm, 12mm and 18mm. The product is available in a flat backed configuration that is ideally suited to building and waterproofing applications where point loads are minimised on the waterproofing membrane that may be applied to the wall (see CD12). Conventional 18mm double sided profiles are also available (see CD18). ProDrain® Sheet Drain is also available in a profile that allows a compressive load in excess of 700 kPa to be applied to the product without crushing. This product is particularly suited to very high wall applications or where the product is laid horizontally and there is a requirement to withstand large vertical loads such as in mining or landfill applications (see PD6000).

Three unique products are available within the range to suit the proposed application.

ProDrain® CD12

ProDrain® CD18

ProDrain® 6000

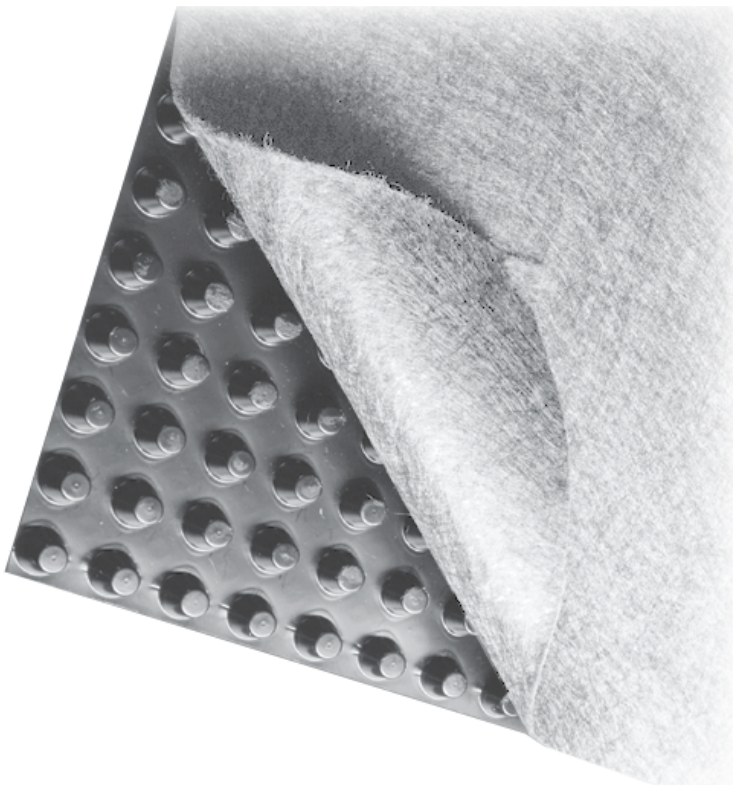
All products have common features of unique polymer void geometry combined with a nonwoven geotextile attached to one side of the product.

The core profile allows for the efficient discharge of water along the core with the geotextile preventing any blockage of the core from fine soil particle movement.

The ProDrain® Sheet Drain System is manufactured in widths from 1m to 1.2m with roll lengths varying from 15m to 25m dependent upon product selection.

Cutting of the roll, on site, is easy to carry out, to suit the application specifics (see our installation guide for further details).

The ProDrain® Sheet Drain System is used to replace conventional drainage aggregate systems, saving time and money due to its lightweight structure and quick and easy installation without the need for heavy equipment.



Quick Product Selection Guide

Depth of Wall Structure (m)	PRODUCT ProDrain® Drainage System		
	CD12	CD18	PD6000
2	Yes	Yes	Yes
4	Yes	Yes	Yes
6	Yes	Yes	Yes
8	Yes	Yes	Yes
10	Yes	Yes	Yes
12	Yes	Yes	Yes
14	Yes	Yes	Yes
16	Yes	Yes	Yes
18	Yes	Yes	Yes
20	Yes	Yes	Yes
22	Yes	Yes	Yes
24-35	Yes	Yes	Yes

Product Guide is based on stated compressive capacity of each product.
Soil assumed unit mass 20kN/m³. Soil type and saturation degree may influence selection.
No allowance has been made for possible long term creep effects of the core.

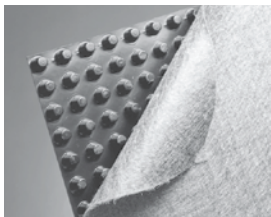
ProDrain® Sheet Drain System Specifications

All ProDrain® products are fitted with a nonwoven geotextile filter wrap. The product may be laid in a number of directions to suit a specific application. In all cases the ProDrain® is positioned such that the side of the product that has the geotextile attached is facing towards the soil. The geotextile can filter a wide range of soil types and can generally be backfilled with on-site materials however the likelihood of geotextile blockage from problematic soils should always be investigated by the client engaged engineer.

			ProDrain® CD12	ProDrain® CD18	ProDrain® 6000
PROPERTY	UNIT	TEST METHOD			
PRODRAIN CORE PROPERTIES					
Core Structure		Physical	Single Cuspated Flat Back	Double Cuspated	Single Cuspated Flat Back
Core Material	Polymer	Component	HDPE	HDPE	PP
Core Thickness	mm	ASTM D1777	12	18	10
Core Open Volume	%	Physical	>90	>90	>90
PRODRAIN GEOTEXTILE PROPERTIES					
Structure	Construction	Component	Nonwoven Geotextile	Nonwoven Geotextile	Nonwoven Geotextile
Material Type	Polymer	Component	PP/PET	PP/PET	PP
Colour	Visual	Visual	Grey	Grey	Black
GEOCOMPOSITE PROPERTIES					
Discharge Capacity @ i = 1	l/min/m	ASTM D4716	>155	>250	>155
Compressive Strength	kPa	ASTM D1621	>200	>250	>700
GEOCOMPOSITE ROLL PHYSICAL PROPERTIES					
Roll Width	m	Physical	1.0	1.0 or 1.2	1.22
Roll Length	m	Physical	25	25	15.24
Transport Dimensions	m	Physical	0.65 Dia. x 1	0.85 Dia. x 1 or 0.85 Dia. x 1.2	0.5 Dia. x 1.22

Installation Procedure Overview

ProDrain sheet drainage products are simple to install however some planning in implementation of the task is required. The product may be installed in a number of directions that is convenient to the installer, the application and which minimises product wastage. In all situations it is important that all edges are adequately sealed against the uncontrolled ingress of soils. There may be a requirement for specific collection systems at the base of the ProDrain® sheet drain to efficiently discharge collected water. A conventional "agi pipe" or the ProDrain SD collector pipes are generally suitable for use. It is important that such drains allow for the efficient discharge of water external to the application. Please contact Global Synthetics for additional information relating to installation.



STEP 1.
Peel back the geotextile layer off the last two rows of dimples on both boards to be joined.



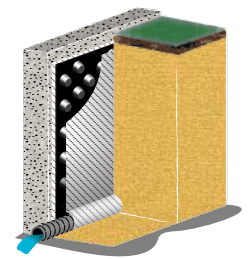
STEP 2.
Apply a spot of neutral cure plastic adhesive to each dimple cavity.



STEP 3.
Overlap the sheets and press together.



STEP 4.
Fold back the geotextile onto the surface and tape the joint to hold it together until the backfill soil is placed against.



COMPLETION.
Ensure when necessary, that suitable outlet drainage is installed. Any compaction near the face of the product should be carried out with care.

More about Global Synthetics

Global Synthetics is a 100% Australian-owned company, proud to offer a complete range of high-quality geosynthetic products backed by over 100 years of combined staff experience in the industry. We have supplied products to some of the largest recent infrastructure works in Australia. Global Synthetics provides major benefits to any geotechnical engineering project with the right products and our technical expertise. Stay on top of the latest Global Synthetics information and visit our website at www.globalsynthetics.com.au

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