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(13.6) N5 N6

Common Arrangement R12  
Uniclass  
L1414/L1415



# Geomembranes



Geomembrane Products

# Geomembranes



**Geomembranes are essentially impermeable lining materials used as fluid or containment barriers.**

Since the 1950's engineers have successfully designed systems with a wide range of geomembranes and associated geosynthetic products to protect our environment and water resources in particular.

Geomembranes have proven to be far more effective than traditional products such as concrete, asphalt and compacted clay. They display a wide range of physical, mechanical and chemical resistance properties and can be compounded for greater resistance to ultraviolet light exposure, ozone and micro organisms. Different combinations of these properties exist in various geomembranes allowing the engineer to address a wide spectrum of applications. Thorough knowledge of the application is necessary in order to select the appropriate membrane and design a successful Geosynthetic Containment System.

More economical to install, Geosynthetic Containment Systems are less susceptible to ground movement and are now considered the safest method in the majority of applications.

Geomembranes can be of polymeric or composite construction have smooth or textured surfaces. Textured surfaces provide enhanced friction characteristics which can be important in certain applications.



West Nurseries, Spalding

Advanced products, as well as manufacturing and installation techniques, continue to evolve as the geosynthetic industry steadily improves existing technology and strives to address the future needs of the containment industry.

As you will see on the following pages, Geosynthetics Limited has put together the largest and most comprehensive range of geomembranes available today. Allow us to use our extensive knowledge of products and applications to help you select the best product for you project.



Marie Curie Pond Install, Solihull

## Services Design

Geosynthetics Limited employs an incredible knowledge bank. Our employees have a vast knowledge of materials, products and applications. Not only can we design your containment system, recommend the correct products regardless of source and install the whole system, we can develop the quality control procedures necessary to ensure your system works from day one.

## Installation

Product selection is only one part of the process. No membrane or containment system can be effective without proper installation. Quality control of installation is as important as quality control during production. Geosynthetics Limited and its sister company Stormwater Management Limited have extensive experience of the complete installation process and will manage, supervise and install the whole project if required.

## Delivery

Geosynthetics Limited is committed to offering the most comprehensive range of geosynthetic products from stock. Fast delivery is our speciality. We are committed to offering a next day delivery service and we are very proud of our customer service record.

Materials	
HDPE	High Density Polyethylene
LLDPE	Linear Low Density Polyethylene
PP	Polypropylene
PVC	Poly Vinyl Chloride
EPDM	Ethylene Propylene Diene Monomer
BUTYL	Butyl Rubber

Applications	
<ul style="list-style-type: none"><li>• Waste Management</li><li>• Lakes, Ponds and Reservoirs</li><li>• Root Barriers</li><li>• Stormwater attenuation tanks</li></ul>	<ul style="list-style-type: none"><li>• Gas Protection</li><li>• Wetlands (Aquaculture)</li><li>• Ditch Lining</li><li>• Slurry Lagoons</li></ul>

**Geosynthetics Ltd** is a leading distributor

**Please call**

**01455 617 139**

or email [sales@geosyn.co.uk](mailto:sales@geosyn.co.uk)  
for further information.

Wide  
product  
range

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## Product Range

### HDPE Geomembranes

HDPE is recognised by the lining industry as the most durable of impermeable geomembranes, manufactured from prime quality raw materials which give it a very high resistance to stress cracking. HDPE is also extremely resistant to most chemicals, this coupled with its excellent physical properties make it the geomembrane of choice.

Geosynthetics HDPE range of products are;

#### AquaBlock HD

Geosynthetics offer various standard roll sizes for lining and containment applications. Some examples of uses for AquaBlock HD are Heap Leach Pads, Wastewater Treatment Lagoons, Landfill, Leats and Slurry Lagoons.

#### CarbonBlock

Hydrocarbon barrier; Prevents the ingress of latent hydrocarbons into a development. Used on Brownfield and redevelopment sites such as old petrol forecourts.

#### VoltBlock

Dielectric Geomembrane used extensively on modern electric transport lines. Prevents stray current from transferring to the passenger platforms, approved for use on the Docklands Light railway.

#### KnotBlock

KnotBlock is a Japanese Knotweed barrier that complies fully with the knotweed code of practice document released by the Environmental Agency. Originally introduced as an ornamental plant, the Japanese species knotweed has become a nationwide problem due to its virulent invasive nature. Geosynthetics knotblock product is very cost effective due to its very large roll size minimising the needs for joints as stated in the Environment Agency's code of practice.

#### RootBlock

RootBlock is a high performance root barrier developed with a broad spectrum of indigenous trees and shrubs. The product has been specifically designed for use as a root barrier, where an ultra strong, durable, robust membrane is needed. It has been designed and manufactured with the Environment Agencies 'Knotweed Code of Practice' as the primary driving force. This ensures that is capable of almost every imaginable use as a root barrier.



Banbridge Hydro Scheme



Madston Gainsborough Site

ator of geosynthetic materials in the UK

Design  
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**Geosynthetics**

# Product Range

## LLDPE Geomembranes

As an alternative to our HDPE range of liners, Geosynthetics also offer a Linear Low Density Polyethylene (LLDPE) geomembrane. LLDPE Liners provide the client with greater flexibility and elongation compared to that of HDPE, these characteristics are of great benefit for certain applications.

Geosynthetics products in the LLDPE range are;

### AquaBlock LM

Geosynthetics offer various standard roll sizes for lining and containment applications. Examples of uses for AquaBlock LM are; Aquaculture Ponds, Attenuation Tanks, Decorative ponds, Canal Linings, Landfill Cappings, Swales, to name but a few.

### PP, EPDM, PVC, and Butyl Rubber liners.

Geosynthetics can also supply alternative membranes to HDPE and LLDPE, these are useful when the client requires a much more flexible or even a bespoke sized lining material for applications such as water containment, reservoirs, run off ponds, water features or pond liners.

Geosynthetics technical staff are just a telephone call away and are able to recommend to the client the correct material for their specific projects.

#### Supply Options

- Pre-Fabricated & Welded to required dimensions. This option is particularly suited to EPDM & Butyl rubber lining. We can fabricate single piece sheets up to 45m x 40m EPDM and Butyl providing a simple no hassle solution for the contractor
- Full subcontract supply and install service providing fully welded and certified installations
- Supplied in roll form with tapes for self installation



Campbell Rd, Stoke-on-Trent



SA1 Development, Swansea Waterfront



A46 Newark to Widmerpool, Newt Ponds

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Geosynthetics

## Product Range

### Bentotex - GCL

To further supplement our range of impermeable polyethylene liners we also offer our Bentotex product. Bentotex is a Geosynthetic Clay Liner (GCL). It is an innovative composite product manufactured using powdered Bentonite clay sandwiched between a woven and a non-woven geotextile to give a very strong robust product.

The Bentonite clay gives the Bentotex its unique 'self healing' properties. Once the product is hydrated and confined under the required minimum 300mm of cover material; if the product is punctured by an object Bentotex seals around it healing itself. This is one of the main reasons it is specified for a large proportion of public works contracts and landfill applications. Bentotex is not compromised by root penetration and is ideal for reed beds and wet systems.

The installation of the material is not dependent on prevailing weather conditions and unlike manmade (HDPE/LDPE/ Rubber) liners; it can be laid in cold inclement conditions. The material needs no specialist welding or power on site during installation, thereby offering large savings on labour and plant costs.

A comprehensive installation guide and expert advice is available on request from Geosynthetics.



Fernhill Farm, Somerset

#### Applications

- Ponds
- Lakes
- Lagoons
- Wet Systems
- Reed Beds
- Landfill (caps and lining)
- Canals and Fisheries

#### Benefits

- East to Install
- Self Sealing
- Excellent Slope Stability
- High Chemical Resistance
- Excellent Climate Resistance
- Resistance to Differential Settlement
- No Protection Fleece Required



Manceter Quarry



East Barnet School