Export Product Guide

A guide to geosynthetic products available in export markets

abg | creative geosynthetic engineering

About ABG

ABG are a market leader in the development, manufacture and technical support of high performance geosynthetic solutions for use in a wide range of civil engineering and environmental projects.

About ABG

Formed in 1998 and based in Meltham in the heart of the pennines, ABG has developed an excellent reputation for quality products and outstanding service.

The ability for rapid product development ensures that the most innovative, up to date and cost effective solution can be found for most engineering problems involving soil or water.

All ABG products are CE marked and approved for use by leading UK and international authorities. Technical support is provided by our well trained and experienced staff, many of whom are chartered engineers. This support extends to design, design confirmation, feasibility study, technical support and cost advice.

ABG encourages the use of cost saving, sustainable and environmentally friendly materials. In general our products are lighter and more compact than conventional materials, as well as being recyclable to help preserve natural resources.

igs INTERNATIONAL GEOSYNTHETICS SOCIETY

ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026
Cert no: 570
ISO 9001
ISO 14001

carbon footprint standard CO_2e Assessed Organisation

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Product Selector

This chart is provided as a handy guide to ABG's range of products and some of their applications. It is by no means complete in the applications listed, so if your particular requirement is not included please contact our export sales department to discuss your project specific requirements.

	Page Number	Landfill Cap Drainage and Gas Collection	Leachate Collection	Capillary Break Layer	Subsurface Water Drainage	Leak detection in lining systems	Gas ventilation beneath buildings	Structural Drainage	Waterproofing/Protection	Basement Drainage	Tunnel Drainage	Roof Deck Drainage (Green Roofs)	Landscape Drainage	Highway Drainage	Rail Track Drainage	Embankment Drainage	Topsoil Retention	Silt Control
Pozidrain	3	★	★	★	★				★									
Leakdrain	4					★												
Deckdrain	5				★			★	★		★	★						
Roofdrain	6											★						
Cavidrain	7				★						★							
Fildrain	8				★										★	★	★	
Turfdrain	9				★									★				
Gasflow	9						★											
Erosion Control	9																★	★

Further information on all the products and applications is available by visiting our website. Here you will find technical information and supplementary information such as product brochures, case studies and reference lists.

Pozidrain®

Pozidrain® is a preformed drainage and gas venting layer specifically designed as a replacement for traditional methods of construction utilising filter stone. It offers many benefits over filter stone including better flow performance, lower environmental impact, reduction in site transport, easy installation and cost savings on the project.

Applications

Pozidrain® forms a strong, robust drainage layer that can be used in the collection of leachate and ground water in both landfill containment and cap drainage systems and also as a gas venting system for the collection and dispersal of landfill gases. **Pozidrain®** can also be used as a capillary break layer in the restoration of contaminated land. It is fast and easy to install and requires no specialist plant and only minimum training for the installation team.

Manufacture and composition

Pozidrain® consists of a HDPE cuspated core bonded to a heat treated needle punched geotextile filter fabric. The geotextile is bonded to the core to prevent intrusion into, and blockage of, the drainage passages under the load action of the backfill material.

Chemical resistance

Pozidrain® offers excellent resistance to leachate and other common chemicals.

Sizes

4, 6, 7, 12 or 25 mm thick x
4.4m wide, 25 to 150 m lengths.

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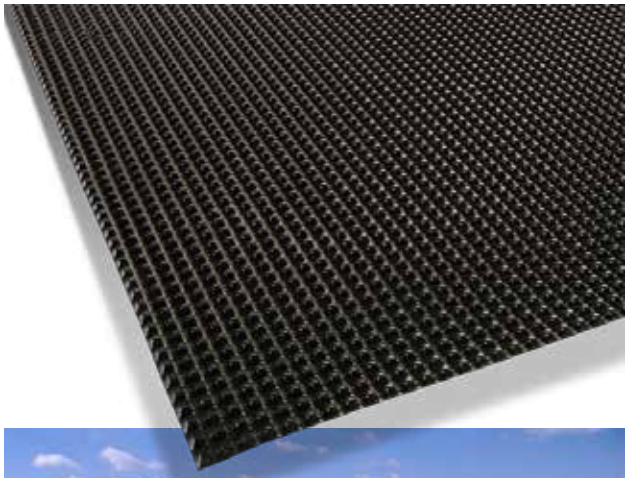
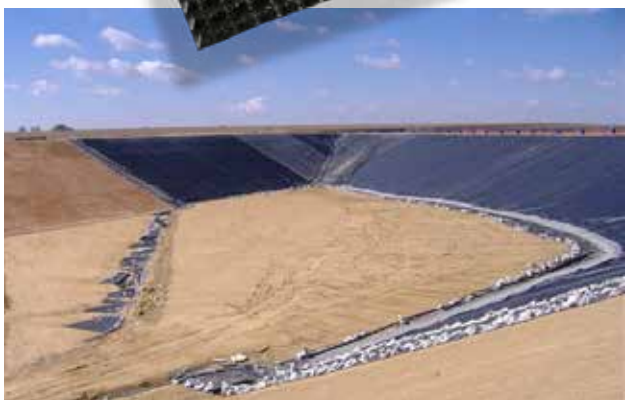
Leakdrain®





Leakdrain® comprises a single cuspated core with very high compressive strength performance. This high compressive strength combined with high in-plane flow capacity allows the flow of leachate and other particle laden liquids without the risk of clogging, even under very high loads.

Applications

The principal application of **Leakdrain®** is as a leak detection layer for use within the basal lining of containment systems.

It is installed between the primary and secondary barrier forming the basis of an efficient leak detection system.

Leakdrain® will not only assist in identifying the presence of a leak, but also has sufficient capacity to collect the discharge and transport it to a collection point until the necessary repairs are made. **Leakdrain®** can be installed quickly and easily and requires no specialist plant and only minimum training for the installation team.

Manufacture and Composition

Leakdrain® consists of a high density polyethylene (HDPE) single cuspated core.

Chemical Resistance

Leakdrain® offers excellent resistance to leachate and other common chemicals.

Sizes

3, 5 and 6mm thick x
2.2m width, 75 to 180m roll lengths.

Deckdrain®

Deckdrain® is a high performance geocomposite drainage layer that directly replaces granular drainage stone in a number of construction applications.

Structural Drainage

In structural drainage applications **Deckdrain®** forms a robust drainage system that is designed to relieve external water pressure from buried structures. It has many areas of application including within retaining walls, tunnels, roof gardens and buried tanks.

Deckdrain® may be laid horizontally or vertically in the construction and provides high flow capacity, along with the benefit of providing additional protection to waterproofing systems.

The use of **Deckdrain®** reduces the amount of excavation and enables site won materials to be used as backfill, thereby greatly reducing movement of materials to and from site.

Block Paving Drainage

Deckdrain® has been developed further for use in block paving drainage where its function is to collect and remove seepage water from the sand course laid below the paving. Without **Deckdrain®** the sand can easily become saturated and can liquefy under traffic loading, resulting in settlement and rutting. **Deckdrain®** provides a cost effective method of preventing this type of failure.

Chemical Resistance

Resistant to all common chemicals.

Sizes

4, 6, 7, 12 or 25 mm thick x
1.1m, 2.2 m and 0.915 m width, 25 or 50 m lengths

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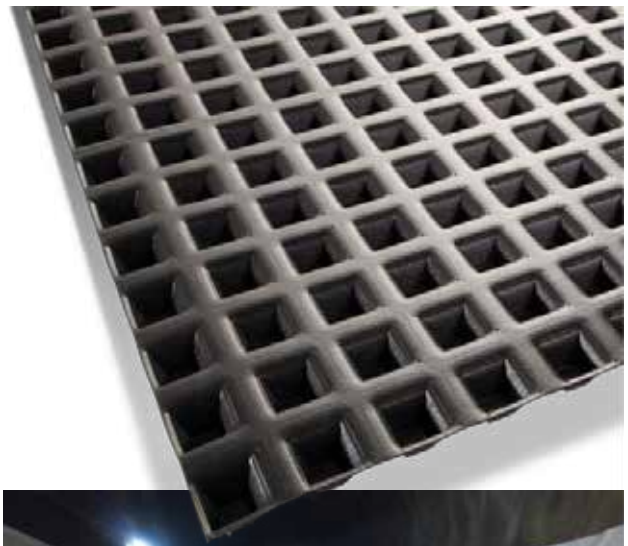
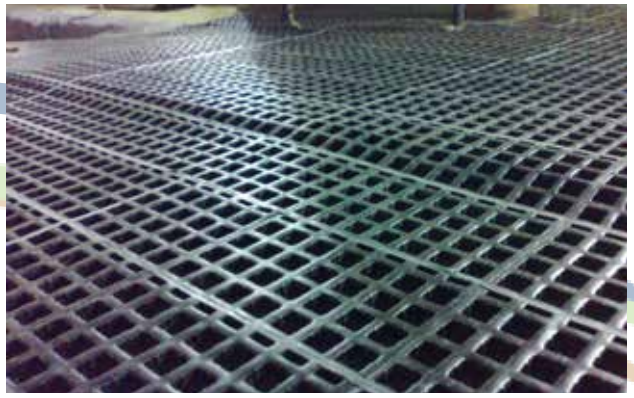
Cavidrain®





Cavidrain® is a preformed cavity drainage system designed specifically to relieve water penetration from buried structures such as tunnels, basements and underground car parks. It is suitable for use in both new build and existing structures.

Tunnels

In tunnel construction **Cavidrain®** provides a drainage layer to collect infiltration water from behind tunnel linings.

Cavidrain® may be used alone or form part of a system incorporating waterproofing membranes. Typically the **Cavidrain®** is fixed to the excavated face of the tunnel and then shotcrete is applied to the back of the core forming the internal surface of the tunnel. **Cavidrain®** can be used in road and rail tunnels, mine-shafts and interceptor tunnels.

Basements

In basement waterproofing, **Cavidrain®** is designed as a waterproofing system that enables fast track construction by eliminating wet trades and by removing the waterproofing from the critical path. The high strength core is designed to withstand the imposed loads associated with wet concrete.

Once poured the concrete fills the back of the dimples and so, once cured, the ultimate load capacity is that of the concrete.

Cavidrain® maximises the available internal space, can reduce the volume of materials excavated and is quickly and easily installed.

Sizes

3, 6, 10, 20, 40, and 60mm thick x
920 and 2250mm wide, 20m roll.

Fildrain®

Fildrain® is a geocomposite drainage system which collects and channels water to a carrier pipe for transportation to a suitable discharge point. It has a very high flow capacity, many times that of traditional crushed stone (specific data is available). This is due to the unique open structure created by the dimpled construction which allows unhindered water flow. The **Fildrain®** range of drainage products have many applications and are typically used for the drainage of highway edges, car parks, airfields and similar applications.

Fildrain® also has applications in the drainage of embankments and reinforced earth structures, cut-off trenches on contaminated land and landscape applications where a narrow trench is dug and the **Fildrain®** placed within and backfilled using excavated materials. It can also be used as the basis of a gas collection system beneath man made reservoirs and snow water ponds.

Manufacture and Composition

Fildrain® consists of either a single or double cuspate HDPE core with a non-woven geotextile filter thermally bonded to one side and usually fully wrapped over.

Sizes

Fildrain® is available in widths from 100mm to 4.4m, typically in roll lengths of 50m and is manufactured in thicknesses of 4, 6, 7, 12, 25 and 50mm.

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Roofdrain®

Roofdrain® consists of a perforated cuspated HDPE core with a geotextile bonded to either one or both sides and is designed for use in the construction of extensive green roof systems. The drainage design of intensive green roofs requires only a simple soil layer with a drainage layer for structural drainage (see **Deckdrain®** p5). By contrast the modern method of an extensive green roof requires a combination of efficient drainage and water attenuation in order to allow the ecology to flourish. **Roofdrain®** allows the storage of water within the cuspates of the HDPE core whilst facilitating the efficient drainage of any excess water away from the roof. This helps prevent the root growing media from drying out during dry periods and from becoming waterlogged during wet periods.

Using **Roofdrain®** within a green roof construction also assists in cooling the roof by maintaining a constant air void. **Roofdrain®** provides both drainage and attenuation of water in a convenient, lightweight and cost effective layer. When used within a roof construction it provides a versatile system for the collection of surplus seepage water at the base of the growing medium and for the prevention of water pressure on the structural waterproofing.

Manufacture and Composition

Roofdrain® comprises a perforated HDPE core with a filter geotextile bonded to the upper side. An additional protection geotextile may be bonded to the under side to provide protection to the roof deck.

Sizes

Roofdrain® is typically supplied in rolls of 915mm wide and in thicknesses of 20, 25 and 40mm.

Other ABG Products

Turfdrain

Turfdrain® is a high performance geocomposite drainage system designed for use in the drainage of grass playing surfaces and amenity areas. The drain can be installed in both existing surfaces and new build facilities. It comprises a 25mm HDPE core completely wrapped in non-woven geotextile filter fabric and can be installed quickly into 35mm slit trenches. Once installed the playing surface is immediately available for use. **Turfdrain®** is available in heights from 100mm to 250mm and is supplied in rolls of 50m length

Gasflow

Gasflow is designed for the ventilation of hazardous gases from below substructures. It consists of a cuspated HDPE core with a bonded or fully wrapped geotextile and creates a ventilation void beneath the slab construction. **Gasflow** has an extremely high in-plane flow rate to ensure the gas is collected and dispersed quickly. The high efficiency and minimal thickness of **Gasflow** reduces the amount of excavation required on site and, as a result the amount of material to be moved making it a cost effective alternative to the use of traditional stone blanket venting layers.

Erosion Control Products

ABG have a comprehensive range of environmentally friendly erosion control products including: **Erosamat Type 3** for permanent erosion control - a dense mat of polypropylene fibres thermally bonded together to form a tough and flexible erosion mat. **Webwall** is a modular retaining wall system that utilises low grade fill within a geocellular matrix that is then planted to create a green facia. **Webwall** is commonly used in the construction of noise barriers, retaining walls, steep slopes and blast bunds.

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Reference Projects

A selection of recent and large-scale projects showing the variety of product applications successfully specified and supplied by ABG:

Project	Product	Application	Country	Size
Cross River Rail	Cavidrain	Invert drainage	Australia	50,000 m2
El Soldado Mine	Pozidrain	Tailings lining	Chile	50,000 m2
Commercial Boulevard	Pozibreak	Salt barrier	Qatar	46,000 m2
Expressway 61	Fildrain	Carriageway drainage	Poland	35,000 lm
Young Dong Tunnel	Cavidrain	Invert drainage	South Korea	75,000 m2
Kandilli Reservoir	Fildrain	Gas venting	Turkey	10,000 lm
South Eastern Motorway	Deckdrain	Bridge abutment drainage	Ireland	4,000 m2
Balleally Landfill	Pozidrain	Capping and gas collection	Ireland	400,000 m2
Sandton City	Deckdrain	Block paving drainage	South Africa	16,000 m2
Mei Foo Station	Deckdrain	Green roof	Hong Kong	27,000 m2
International Finance Centre	Deckdrain	Block paving drainage	Dubai	20,000 m2
Gautrain Tunnel	Cavidrain	Invert drainage	South Africa	50,000 m2
Obra Parque	Piledrain	Secant wall drainage	Spain	3,300 lm
Chi Ma Wan Cable Tunnel	Cavidrain	Tunnel wall lining and cavity drainage	Hong Kong	16,000 lm
QGC, Orana Ponds	Pozidrain	Reservoir lining	Australia	9,000 m2
Estarreja Landfill	Pozidrain	Capping	Portugal	95,000 m2
Kamoto Mine	Leakdrain	Heap leach pad lining	DRC	75,000 m2

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ABG_Export Product Range_Brochure_ver2