



# Global Synthetics

LEADERS IN GEOSYNTHETICS





# Mission Statement

Global Synthetics mission is to provide technical excellence, industry leading knowledge and be the partner of choice across the APAC region, for infrastructure development requiring advanced, high quality geosynthetic solutions. We are committed to bringing the latest innovation in geosynthetic products to every project and ensure we are committed to building a sustainable future for our clients, employees and generations to come.





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## About Us

Global Synthetics Pty Ltd is a leading Australian-owned distributor and manufacturer of geosynthetics, serving the engineering, construction, landscape, and building industries across Australia and the Pacific region. With offices in Brisbane, Sydney, Melbourne, Adelaide, and Perth, we are strategically positioned to provide innovative solutions and exceptional service.

Our cutting-edge geosynthetic products are designed using the latest technology and materials, ensuring the highest standards of quality and performance. At Global Synthetics, we are dedicated to delivering superior products, backed by unparalleled expertise and customer service.

## Our Areas of Product Expertise

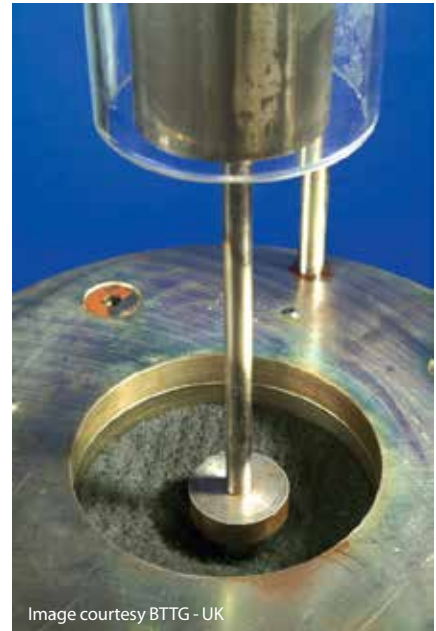
- Landfills
- Hydraulic Structures
- Mining
- Transportation
- Flood Protection
- Ground Improvement
- Slopes and Walls
- Environmental
- Erosion Control
- Storage & Containment of Liquids
- Soil Reinforcement
- Domestic Applications
- Coastal
- Renewables

# Quality

## Trusted Quality and Partnerships

We proudly collaborate with some of the world's most respected geosynthetic manufacturers, ensuring the highest standards at every step of production. Our partner commitments are to use the highest quality raw materials, advanced manufacturing techniques and rigorous quality control processes.

All of our manufacturing partners are fully accredited, adhering to stringent global standards in production, management, and testing.



## Materials

Global Synthetics use a range of polymers including polyester, polypropylene, polyethylene and aramid to ensure that the most durable polymer is used for performance in a range of environmental and service conditions. You are assured of the most advanced choice of materials when selecting a product supplied by us.

## Distribution

Strategic warehouse locations and an excellent stock holding across our product range ensures that your projects are serviced quickly and efficiently. Our internal sales staff have a passion in ensuring that all orders are processed quickly and efficiently.

Our warehouse staff and transport team ensure that we deliver product to you in a timely and safe manner. Global Synthetics will co-ordinate all orders such that our customers are fully aware of all aspects of the delivery programme and are able to ensure that site personnel can safely unload in the most efficient manner.







## Expertise Across Engineering, Technology and Sustainability

At Global Synthetics, we leverage our global network of experts to solve the most complex challenges for our clients. Our experienced sales and technical teams provide innovative solutions backed by the expertise of professionally qualified engineers, with over 250 years of combined experience. From design to installation, we deliver sustainable, tailored geosynthetic solutions at every stage, ensuring both technical excellence and cost-efficiency.

Driven by a passion for geosynthetics, we focus on delivering innovative solutions with honesty, respect, and transparency. Together, we build strong partnerships, tackle challenges with empathy, and work collaboratively to create lasting impact in our industry.

# Nonwoven Geotextiles



Global Synthetics geotextile products incorporate the latest technology and state of the art materials. Using a range of polymers including polypropylene, polyester, polyethylene and aramid to ensure that the most durable polymer is used for performance in a range of environmental and service conditions. You are assured of the most advanced choice of materials when selecting a product supplied by us.

Our manufacturers have a commitment to quality with accreditation to both ISO Quality and International Test Facility endorsement, with sophisticated in house laboratory testing to ensure that product manufactured, meets or exceeds, required performance criteria.





## Made To Suit The Widest Range of Applications

Global Synthetics provides an extensive range of nonwoven geotextiles in a range of widths from 0.6m to 6m. We manufacture our range of nonwoven geotextiles from either polyester fibre or polypropylene fibre.

The choice of polymer is important in certain applications of use to ensure long term functionality of the geotextile.

Global Synthetics nonwoven geotextiles are offered for use in a wide range of civil, hydraulic, environmental and coastal applications.

### Common Applications of Geotextiles

- Drainage
- Filtration
- Separation
- Reinforcement
- Protection

**Profab® • ProFab® Ultra • Geofirma®**



# Geosynthetic Clay Liners & Geomembranes

## Geosynthetic Clay Liners

Global Synthetics are able to offer a wide range of liners that are compatible with the diverse range of applications and contaminants likely to be encountered.

Bentofix® Geosynthetic Clay Liner (GCL) are factory produced wide width rolls of bentonite “sandwiched” between layers of geotextile. GCL’s are an engineered replacement for traditional clay lining of proposed containment structures.

Global Synthetics Geosynthetic Clay Liners offer the designer an engineered equivalency to clay without the costly import and placement and quality control costs associated with this traditional method. The volume of containment may be significantly increased with the use of a Global Synthetics Geosynthetic Clay Liner as the product offers equivalency to very thick layers of compacted clay.

### Common Applications of GCL

- Environmental
- Landfill
- Mining
- Storage & Containment of Liquids
- Flood Protection

**Proliner® • Bentofix®**







## Geomembranes

A geomembrane is a very low permeability synthetic membrane liner or barrier commonly used to control fluid (or gas) migration in a major project, structure, or system.

The use of membranes in civil and environmental applications is becoming more widespread as there develops a greater understanding of the effects of contaminated ground conditions on structures and the environment.

### Common Applications of Geomembranes

- Waste water treatment facilities
- Landfill caps /closures
- Potable water reservoirs
- Tank linings
- Dam/ Pond liners
- Floating covers
- Solutions ponds for mining
- Retention ponds
- Storage tanks

# High Strength Reinforcement Geotextiles



Global Synthetics provide the ACETex® structural geotextile, a product option that offers design engineers a cost effective and proven alternative to many traditional ground treatment options.

ACETex® is a speciality woven geotextile designed for applications of soil reinforcement. The product is manufactured across a range of tensile strengths up to 2000 kN/m. Having such strength allows its use across a broad range of application areas in all aspects of construction where ground support is required.

ACETex® is manufactured from polyester yarn. This choice of polymer makes its long term load carrying ability outstanding. The influence of temperature on creep effects is minimised with polyester unlike other polymers such as HDPE and Polypropylene.





## Providing positive support

Road and geotechnical design engineers are facing an increasing challenge of constructing roads, embankments, mining platforms and similar infrastructure works on very problematic low load bearing soils.

Previous ground treatments often involved the use of very expensive excavation and replacement techniques, surcharging the site and waiting long periods of time for consolidation to occur, prior to commencement of construction. Such ground treatments involved significant costs and in some instances has led to the abandonment of the project.

Acetex®



# Geogrids

## Pavement Reinforcement

In the application of base reinforcement in pavements there is the design intention of improving the bearing capacity of an existing sub-grade by including one or more geogrid layers above.

The inclusion of a biaxial geogrid generally permits a reduction in granular base course thickness. In some situations, there may be a requirement to increase the service life of the pavement by the inclusion of a geogrid for a fixed pavement depth.

Global Synthetics offer Secugrid® biaxial geogrids in a range of strengths between 20kN/m to 80kN/m and Combigrid® geogrid/geotextile composite in the same strength grades.

### Common Applications of Geogrids

- Base and Subgrade Reinforcement
- Construction of unpaved and paved roads
- Reinforced slopes

Secugrid® • Combigrid® • Acegrid®







## **Slope and Wall Reinforcement**

Global Synthetics is able to offer ACEGrid® polyester geogrid in a range of strengths appropriate for walls and slopes of any dimension. The design strength of the geogrid may be maintained over very long periods of time, as it is common for design lives of the geogrid to exceed 120 years.

ACEGrid® has been used in a significant number of structures throughout Australasia.



# Erosion



## **Turf Reinforcement Mats**

Turf reinforcement mats are designed to improve the shear capacity of natural vegetation in applications of channel and swale restoration. Turf reinforcement mats when selected, designed and installed correctly have the ability to replace many hard armour solutions such as rip-rap and concrete. In slope applications they have a positive improvement in minimising soil loss off the slope.

## **Anchored High Performance Turf Reinforcement Mats**

For applications of shallow slope instability, Global Synthetics have engineered a system marketed as Armormax®. This is a combination of a high performance turf reinforcement mat used in combination with earth percussion anchors. Global Synthetics can provide engineering assistance and advice in these applications.





## Miracell® Geocell Stabilisation Systems

Miracell® is a system of welded polyethylene panels. When the cells are expanded on-site, 'honeycombed' cell shapes are formed. These cells may be either soil filled (landscaping treatments) or granular filled (channel and road support systems).

The unique shape provides positive containment of soil on steep slopes and in channel applications. Miracell® provides additional confinement against water imposed shear forces.

### Common Applications of Erosion Control

- Stormwater Channels
- Embankments & Steep Slopes
- Turf Reinforcement
- Sediment Control

Pyramat® • Landlok® • Armormax® • Miracell®













# Drainage



## Drainage Systems

Global Synthetics provides a complete range of geocomposite drainage products and systems for complete point source water management. Global Synthetics drainage products and systems manages stormwater as a resource and enhances the social and environmental amenity of the urban landscape. Global Synthetics drainage products are lightweight and efficient to install. The products are a replacement for traditional aggregate drainage treatments.

### Common Applications of Erosion Control

- Drain Soil Structures
- Subsoil Drains
- Shotcrete Applications
- Retaining Walls
- Planter Boxes
- Concrete Decks
- Retention Ponds
- Storage Tanks





## Efficient solutions

The complete product offering ensures that whatever the application, Global Synthetics can supply a product to suit the specific design requirements and ensure that drainage issues are dealt with in an efficient manner.

Prefabricated drainage systems have the advantage of being lightweight and can replace traditional granular drainage treatments. Global Synthetics drainage systems offer very competitive options against granular treatments and are now well accepted as a preferred method of providing efficient and long lasting solutions.

Generally the products will be supplied with an appropriate filtration geotextile attached. When necessary, there are a range of connection pieces, allowing products to be joined, terminated and connected to outlet pipes.

**Prodrain® • Protank® • Hyrdocell™ • Pronet®**



# Gabions and Rock Mattresses

## A range of products to suit each application

A gabion (from the Italian word gabbione) - is a cage or mesh basket predominately filled with rocks for use in civil engineering, retaining road and landscaping applications.

Rock Mattresses are a “thin” gabion and traditionally has been used in applications such as creek and channel linings where long term scour is an issue. The confinement of appropriately sized stone within a mesh effectively increases the resistance of such rock to scour for a given flow condition.

A welded gabion incorporates a more rigid welded mesh facing panel construction. The benefits of a welded gabion are realised in land based retaining structures, feature wall cladding, sound walls, seating and other landscape features where the beauty of rock and the clean straight, architectural lines of the welded mesh panels are desirable.

### Common Applications of Erosion Control

- Architectural Finishes
- Freestanding Walls
- Residential Building Finishes
- Retaining Systems
- Coastal Protection Systems
- Flexible Retaining Walls
- Rockfall Prevention
- Scour Protection Systems
- Weir Structures

Link™ • Linkweld® • Terralink® • Linklok®







Link™ Gabions and Mattresses provide a highly versatile solution of earth retention and erosion protection for designers and contractors in a wide variety of applications. Link™ gabions are typically used for earth retention structures. Link™ Mattresses are used in a wide variety of hydraulic structures.

Mesh products also include Linkweld® welded gabions that look very attractive in landscape applications. These gabions are able to be constructed with very defined shapes and make a dramatic architectural statement as well as providing an engineering benefit.

Cost competitive retaining structures use Terralink® mesh panels in conjunction with geogrids to form a soil reinforced wall in applications of road widening and slope stabilisation.

There are a multitude of hydraulic, retaining and architectural treatments that can benefit from a mesh solution provided by Global Synthetics.

# Dewatering

## Dewatering Solutions

Specialty textiles fabricated into large bags or tubes for the containment of materials (generally sand) to form engineering structures in marine environments. They were developed in the USA in the late 1980's. The technology has developed such that these systems are a well accepted engineering methodology that provides a unique and cost-effective solution to engineering problems in a marine environment.

In more recent times the use of such products has been extended to include the effective dewatering of sludge from a range of industrial processes. The use of such products provides a very innovative, efficient and economical alternative to the dewatering of sludge over more traditional methods.



Protube®







## Protube®

The Global Synthetics Protube® is made from a specially constructed geotextile that has excellent tensile strengths and filtration characteristics suitable for the manufacture of dewatering tubes and for the dewatering of a range of sludge materials.

Protube® allows for effective high volume containment with efficient dewatering and volume reduction. The Protube® product offers users cost savings in disposal costs and the ability to on-site manage waste generated with no special equipment.

### Common Applications of Erosion Control

- Sludge Dewatering Bags
- Shoreline protection
- Solids and waste containment
- Agricultural applications
- Municipal applications
- Aquaculture and horticulture
- Wastewater lagoon liners
- Water and wastewater treatment and containment
- Industrial applications
- Environmental containment
- Soil remediation



# Coastal



## Geotextile Tubes

Geotextile tubes can be made up to 32m in circumference and can be manufactured in long lengths that will offer a very good defensive option against major scour events. Ideally these tubes will be covered with sand and then vegetated with sand grasses.

Exposure will only occur during storm activity. Simple remedial measures can be taken to again restore sand cover and revegetate. The geotextile tubes are marketed as ProTube®.

## Geotextile Bags

Geotextile bags are made in two sizes (  $1\text{m}^3$  and  $2.5\text{m}^3$  ) and can be laid in a regular stacked pattern as emergency works when a major erosion issue has been identified.

The use of such bags should be considered as a semi temporary measure until more permanent solutions are implemented.





## When nature has to be helped

Global Synthetics has a number of products that can be successfully used in the stabilisation of coastal foreshores. Due to the unpredictability of the physical environment along all coastal locations and the increasing incidence of urban encroachment into this environment, there are increasing consequences of major damage to infrastructure. Global Synthetics has a number of products that include geotextile tubes (sand filled on site) and smaller geotextile bags (sand filled on site) that can significantly reduce the economic costs of damage from wave attack.

Protube® • Secutex® Soft Rock





# Wick Drains

## Speeding up consolidation

The use of Global Synthetics CeTeau® wick drain can be of significant assistance in increasing the speed of consolidation of very soft soils and ultimately increasing the shear strength of the soil such that some engineering structure may be built.

CeTeau® wick drains consist of a specially designed polypropylene core extruded into a unique configuration to transmit maximum water flow on both sides of the core. The core is fully wrapped in a non woven geotextile filter that is ultrasonically welded at the edges to maintain effective filtration.

### Common Applications of Erosion Control

- Roads, Railways, Dikes and Airports
- Land Reclamation
- Harbour Construction
- Urban and industrial sites
- Stabilisation of slopes
- Degassing of landfills



Ceteau®







CeTeau® wick drains are inserted into the soil by pushing the product to a predetermined depth at a design spacing distance to increase the drainage paths within the soil to be consolidated. Generally there is a surcharge load applied over the area to be consolidated such that the speed of consolidation is increased.

CeTeau® wick drains have been engineered to withstand the significant initial installation stresses that are imposed upon the drain.



# Site Management



## Site Management

The unregulated discharge of sediment laden water from construction activities into adjoining stormwater channels and waterways is having a significant environmental impact. As there becomes a growing awareness of these environmental and economic costs, there has been greater legislation to regulate construction practices. Global Synthetics has an extensive range of products that can, when installed correctly, significantly reduce site erosion issues and contribute to a better local environment.

### Applications

- Bank works in creeks, streams
- Canal works





## Defensive treatment of site problems

Products that are available from Global Synthetics include silt fences, silt booms for waterways, coir logs for temporary stabilisation treatments and a very complete range of turf reinforcement blankets.

Silt booms can be made to order for a specific site condition or we can supply standard units from our stock holdings.

Additionally there are a myriad of other products that include geocells, various staking pin options for erosion products, silt bags to protect the inlets structures of gully pits and biodegradable erosion blankets.

Profab® Silt Curtain • Profab® Silt Fence  
Profab® Silt Sock • Turfpro™



# Training and Industry Association

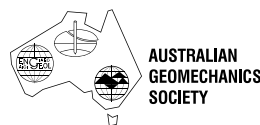
Global Synthetics is dedicated to enhancing client knowledge through comprehensive training and support. We demonstrate this commitment by ensuring product information and technical support are readily accessible.

Additionally, we contribute to industry education by regularly hosting technical seminars on geosynthetic applications for contractors and designers. Our industry seminars feature international experts, showcase the latest design and construction techniques, and include case studies relevant to current industry practices.



**We support our industry by being members of a range of industry associations such as:**

- Australian Geomechanics Society (AGS)
- International Erosion Control Association (IECA)
- International Geosynthetics Society (IGS)
- Waste Management and Resource Recovery Association of Australia (WMRR)







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2024 ATA AWARD OF  
**EXCELLENCE**  
INTERNATIONAL ACHIEVEMENT AWARDS



The Erskine Park Landfill



**Global Synthetics**  
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