Tinhy GEOSYNTHETICS

Add: Diaozhen Industrial District Zhangqiu Jinan Shandong China

Tell：0531-83500588
Fax：0531-88596016

Tinhy GEOSYNTHETICS

Email：info@tinhygeosynthetics.com
https://tinhygeosynthetics.com/

Advancing Geosynthetic Innovation

TINHY GEOSYNTHETICS CO., LTD.

ANTI-SEEPAGE SYSTEM SOLUTIONS PROVIDER

https://tinhygeosynthetics.com

Tinhy GEOSYNTHETICS

We are committed to providing non-leakage and anti-seepage projects for the society.

About us

22years Established in 2002

70000m²+ Area

300+ People

25+ Production lines

At Tinhy, we are pioneers of the geosynthetics industry in china, specializing in manufacturing, installations, R&D, and applications. With a dynamic team of over 300 seasoned professionals and leveraging 25+state-of-the-art production lines, we proudly serve a global clientele spanning over 30 countries. Our product suite includes high-quality geomembranes, geotextiles, geosynthetic clay liners, geo-composites, and more-all expertly crafted for non-leakage and anti-seepage applications. Exceeding the stringent ASTM standards, we offer cost-effective solutions that cater to diverse sectors such as waste management, water conservancy, mining, green roofs, transportation, and beyond. As we expand our global footprint, we're proud to hold recognitions including the EU CE certification, ISO international certification, and AAA credit rating. Trust Tinhy for quality, innovation, and global excellence in geosynthetics.

EU CERTIFICATES

· Company History Milestones

2002
· Jinan Tianhai Plastic Co., Ltd. was founded, contributing to the Chinese "Western Developing" projects in constructing reservoirs

2008
· Introduced 3mm/120mils thick geomembrane production lines
· Introduced Geo-composite production lines
· All products exceed GRI-GM13 standard
· Beijing Olympic Park geosynthetics supply

2010
· Introduced MDS geo-composite production line
· Renamed to Shandong Tianhai New Material Engineering Co., Ltd.
· Won bids for 12 Mexico National Canal projects

2015
· Introduced 8.5m/28ft wide geomembrane line
· Tinhy Geosynthetic application R&D center was founded
· Named "National High-Tech Enterprise"

2018
· Introduced polymer self-adhesive membrane production line
· Won HDPE geomembrane #1 market share
· Renamed to Tinhy Geosynthetics Co., Ltd.

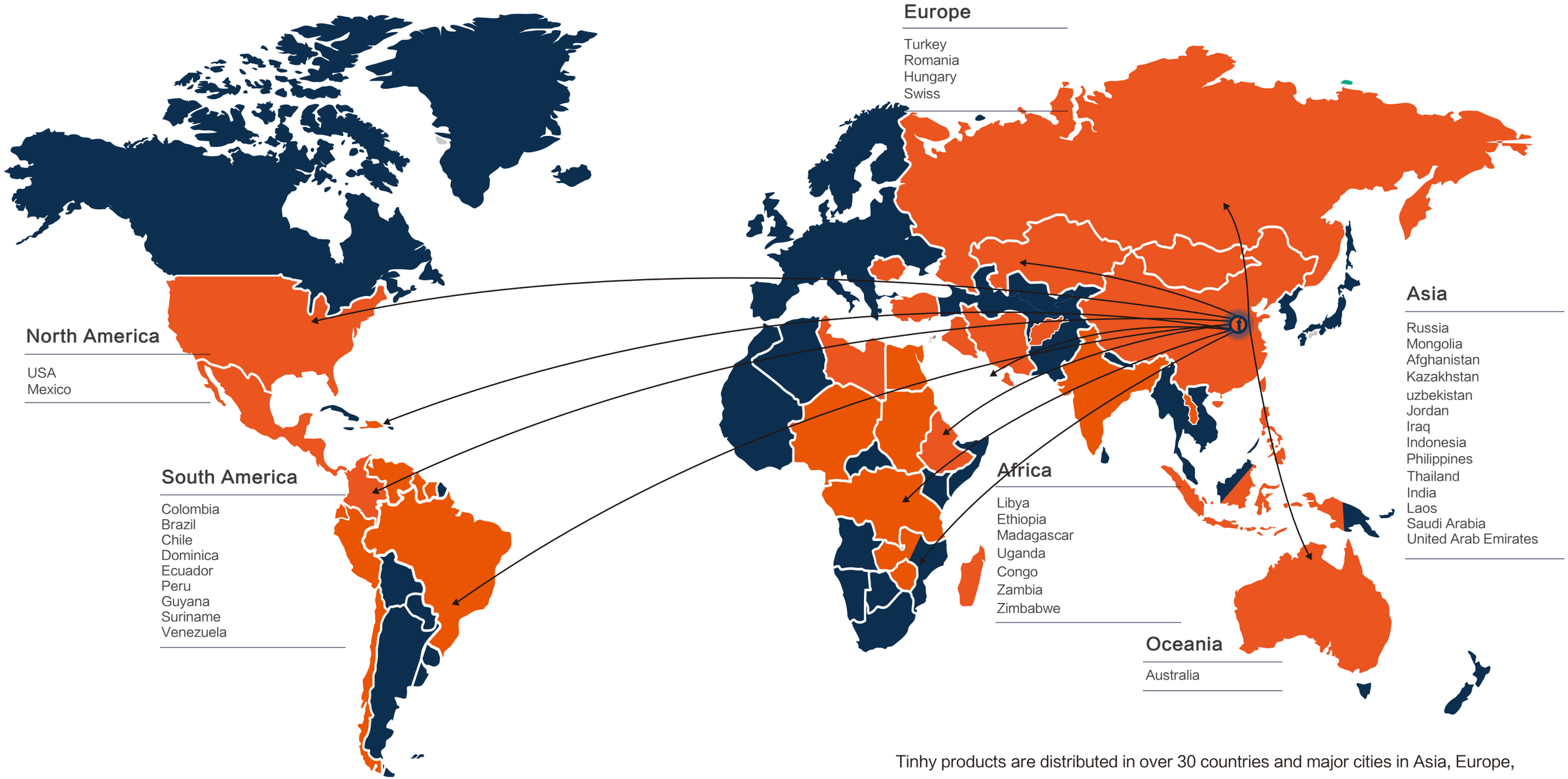
2022
· Introduced 10m/33ft wide geomembrane production line
· Participated in multiple national geosynthetics standards' revisions

2023
· Invested our second factory to supply superior geosynthetics to our global customers

CORPORATE MISSION	Constantly innovating products and technologies, contributing to the society's non leakage anti-seepage projects, and making the life and ecological environment of the earth lasting and safe
CORPORATE PURPOSE	Sharing success with customers, seeking development with employees, and making progress together with society
CORPORATE VISION	Becoming the world's leading whole solution provider for waterproofing and anti-seepage systems, building centennial Tinhy brand
CORPORATE CORE VALUES	Integrity Innovation Responsibility Profession

Global layout

Tinhy GEOSYNTHETICS



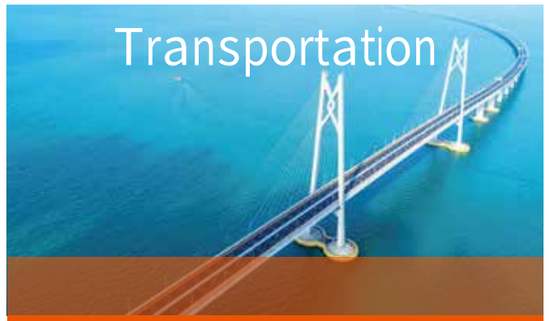
Tinhy products are distributed in over 30 countries and major cities in Asia, Europe, Africa, South America, North America and other continents

Mainly involved: Romania, Hungary, Ear, Libya, Ethiopia, Jordan, Iraq, Uzbekistan, Afghanistan, Russia, Indonesia, Mongolia, Madagascar, Philippines, Australia, the United States, Mexico, Colombia and other countries

Mining Tailings storage / Hazardous Waste Disposal Site /Domestic Waste Landfill / Fly ash landfill / Power Plant AshDam / Oil Tank / Evaporation Pond / Artificial Wetland / Intensive livestock and poultry farming

Green roofing
Underground garage roofing
Underground building side wall
Floor
Excavation Side wall

Reservoir
Canal
River
Watershed managemen
Fish and shrimp pond
Lotus pond



High-speed rail
Subway
Railway
Highway

Products

Geomembrane series

HDPE smooth Geomembrane、LLDPE geomembrane、HDPE textured Geomembrane、Double-color Geomembrane

Geotextile Series

Polyester(PET) filament non woven geotextile、PP/PET staple fiber non woven geotextile、PET/PP woven geotextle

Composite Geomembrane Series

One fabric one membrane、two fabric one membrane、three fabric two membrane

GCL Series

GCL、GCL with membrane / Double-locking edge GCL

Drainage Material Series

Drainage net、Drianage board、Geogrid、Geocell

HDPE Smooth Geomembrane

Product Description

Tinhy HDPE smooth geomembrane liner is made of high-quality polyethylene resin produced by large petrochemical enterprises in domestic and abroad. It is copolymerized by either calendering technology or four-layer co-extrusion process. It has good mechanical properties, high tear strength, strong adaptability to deformation, anti-puncture, anti-aging, anti-ultraviolet, oil-resistant, strong acids and alkalis-resistant, high and low temperature resistance, anti-corrosion and non-toxic, long service life, etc.

Technical Data

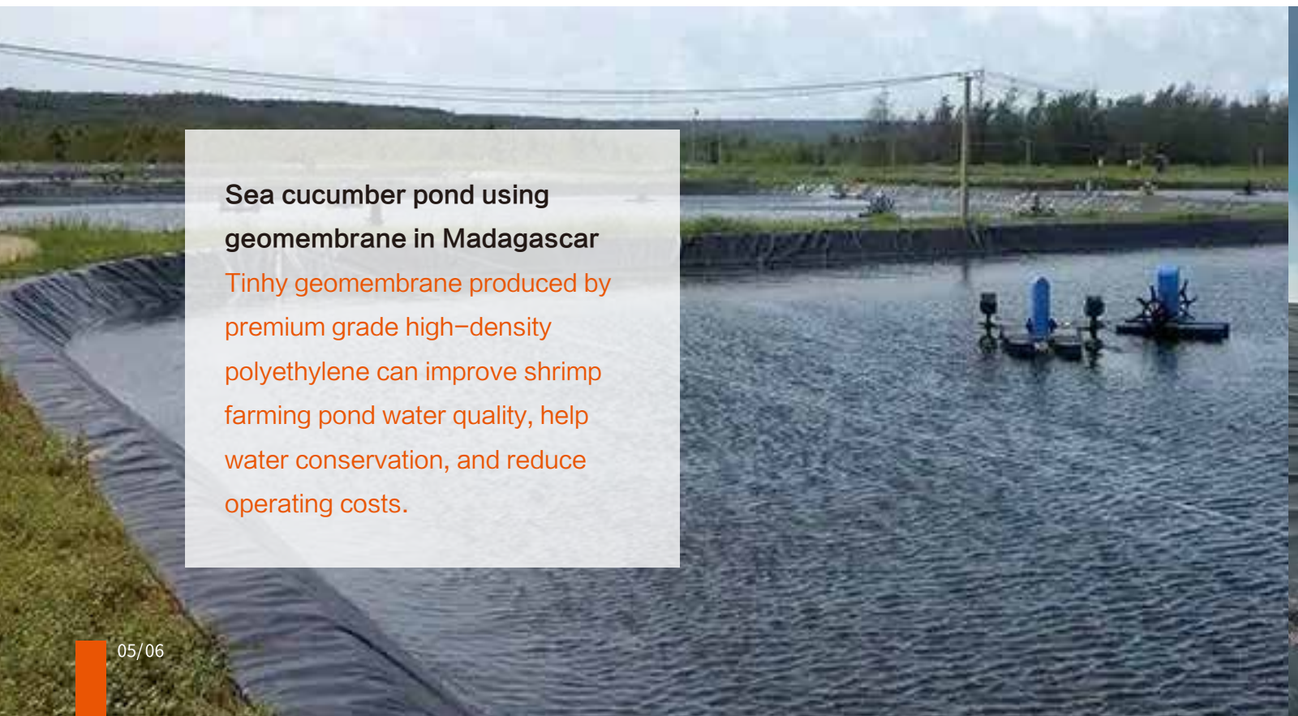
GM13-2016, GB/T, CJ/T

Specifications

Width: 2m~10m,Thickness: 0.2mm~3.0mm
Color: black, white, blue, green...

Application

Landfill Liners and Covers, Hazardous Waste Containment, Heap Leach Pads, Tailings Ponds, Evaporation Ponds, Secondary Containment, Roofing Membranes, Tunnel Linings, Artificial Ponds, Radon Barriers, Fish Ponds and Raceways, Water Storage, Irrigation Canals and Reservoirs, Water Conservation, Biogas Plants, Greenhouses, Railway and Highway Foundations, Bridge Abutments, Airport Runways and Aprons.



Sea cucumber pond using geomembrane in Madagascar

Tinhy geomembrane produced by premium grade high-density polyethylene can improve shrimp farming pond water quality, help water conservation, and reduce operating costs.

LLDPE Geomembrane

Product Description

Tinhy LLDPE liner is a geomembrane made of special linear low-density polyethylene resin. It has extremely high elongation and softness, and is very suitable for projects with uneven settlement or local settlement.

Technical Data

GM17, GB/T, CJ/T

Specifications

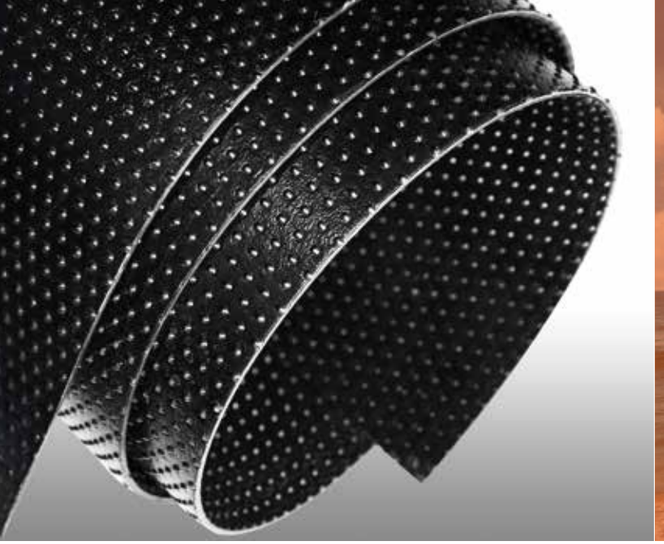
Width: 2m~10m,Thickness: 0.2mm-3.0mm
Color: black, white

Application

Environmental Liners, Pond and Canal Liners, Floating Covers, roofing Membranes, Culvert

Canals using LLDPE geomembrane in Russia

Due to its extremely high flexibility and extensibility, LLDPE is more convenient and efficient in the laning of water channels. It also has the characteristics of excellent resistance to stress cracking, tear resistance and tensile strength.



HDPE Textured Geomembrane

Double-color HDPE Geomembrane

Product Description

Tinhy HDPE Textured geomembrane is made by co-extrusion calendering technology. Its surface is covered with raised column particles to increase the friction. It is suitable for steep slope or vertical slope, providing engineering stability.

Technical Data

GM13-2016, GB/T, CJ/T

Specifications

Width: 2m-8m, Thickness: 0.75mm-3.0mm
Color: black, white, blue, green or double color

Application

HDPE Textured Geomembrane shares similar applications with HDPE Geomembrane; however, it is specifically utilized on sloped surfaces to enhance stability between the Geomembrane, the ground surface, and the Geotextile, when used.

Copper mine using textured geomembrane in Congo

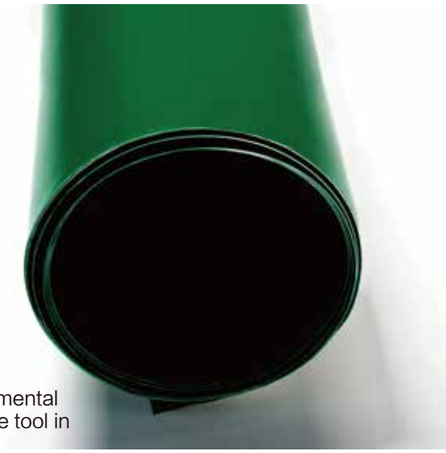
Tinhy's geomembrane products, often used with protective geotextiles and GCL, are widely employed in mining for lining ponds, heap leach pads, tailings facilities, bund areas, and solution corridors. Their extensive use highlights their effectiveness in demanding mining settings.

Landfill base using geomembrane in South Africa

The anti-seepage of a landfill base pond is so important, the standards of the materials are quite high. It needs multiple layers of anti-seepage materials, using smooth and textured geomembrane, geotextile, GCL, drainage net, (geo-composite)...

Product Description

Tinhy double-color HDPE liner is produced by four-layer co-extrusion process, and the material can be divided into HDPE/LLDPE/EVAECB. The main feature is that one face is black, one face is green or white. When used, the green / white color is upward and the black color is downward. It would lower the temperature in the work area, diminish the distortion of materials at the site, and enhance the aesthetic appeal



Technical Data

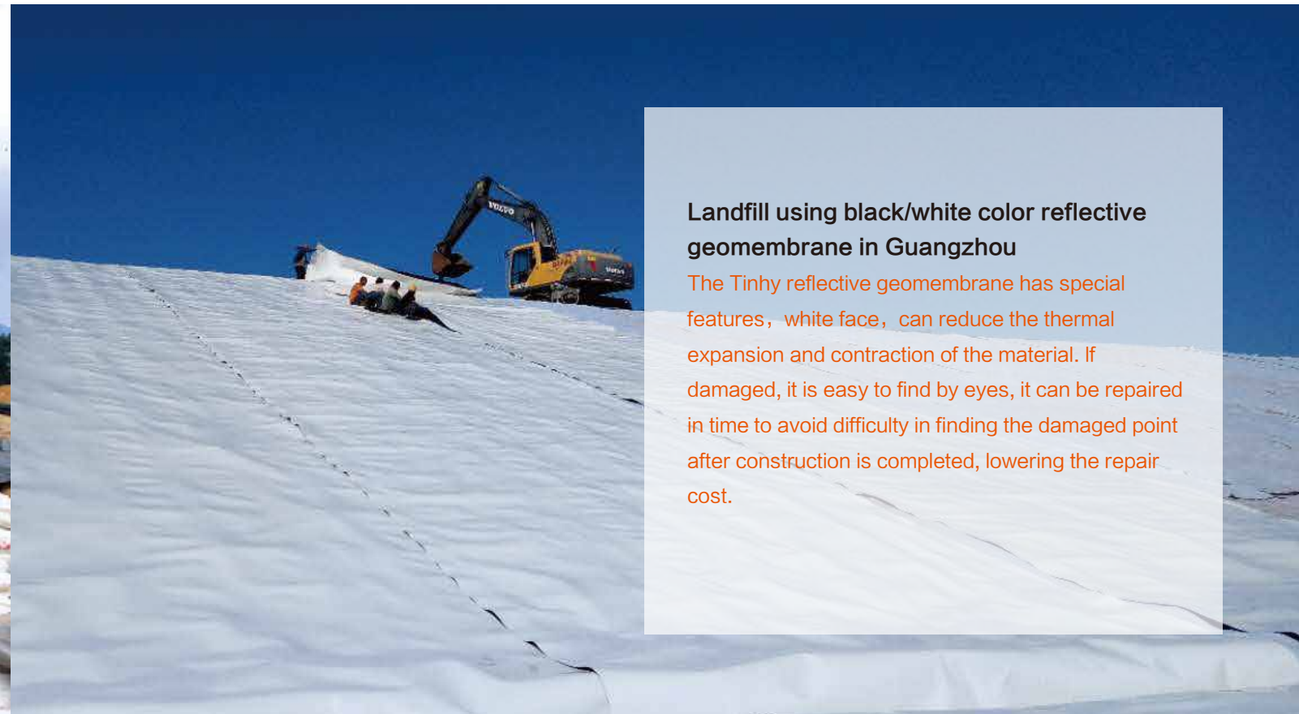
GM13-2016, GB/T, CJ/T

Specifications

Width: 2m-10m, Thickness: 0.5mm-3.0mm
Color: black/green，black/white

Application

Double-color HDPE geomembranes extend the traditional functionality of standard geomembranes by adding features that aid in leak detection, maintenance, environmental protection, temperature regulation and aesthetic integration, making them a valuable tool in a variety of engineering and environmental applications.



Landfill using black/white color reflective geomembrane in Guangzhou

The Tinhy reflective geomembrane has special features，white face，can reduce the thermal expansion and contraction of the material. If damaged, it is easy to find by eyes, it can be repaired in time to avoid difficulty in finding the damaged point after construction is completed, lowering the repair cost.

Polyester (PET) Filament Non-Woven Geotextile

Product Description

Tinhy's Polyester (PET) Filament Non-Woven Geotextile is made by the method of forming and solidifying polyester filaments. The fibers are arranged in a three-dimentional structure. Made from high-quality polyester fibers, this geotextile is known for its exceptional strength and durability. The non-woven design ensures excellent filtration, separation, and reinforcement capabilities, making it an ideal choice for soil stabilization, erosion control, and drainage applications.

Technical Data

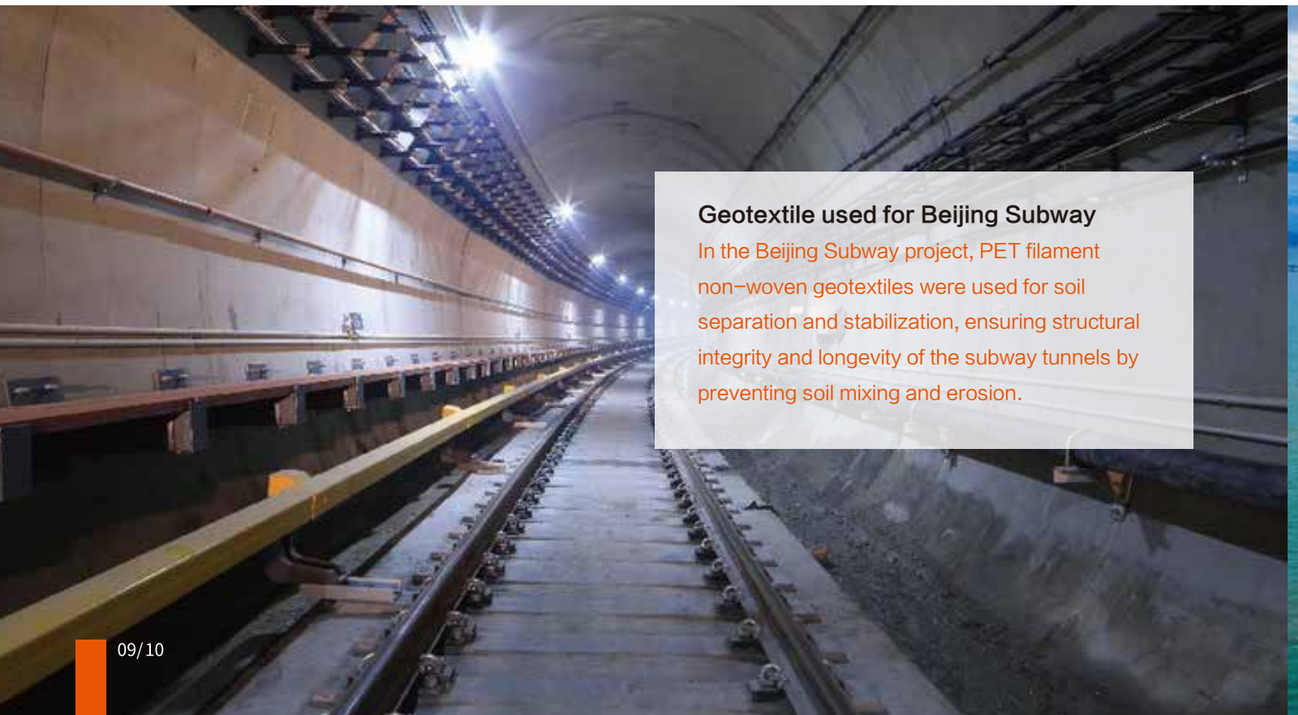
ASTM, GB/T

Specifications

Width: 2m~7m, Weight: 100-800g/m^2
Color: white

Application

Road Construction and Pavements, Erosion Control, Drainage Systems, Railway Engineering, Landfill Engineering, Retaining Structures and Embankments, Water and Waste Management, Coastal and Riverbank Protection, Tunnels and Underground Constructions, Landscaping and Green Roofs



Geotextile used for Beijing Subway

In the Beijing Subway project, PET filament non-woven geotextiles were used for soil separation and stabilization, ensuring structural integrity and longevity of the subway tunnels by preventing soil mixing and erosion.

PP/PET Staple Fiber Needle Punched Geotextile

Product Description

Tinhy non-woven needle-punched geotextiles are made of high-quality polypropylene or polyester staple fibers. They are combed, laid, needled and processed. The product has good flexibility,acid and alkali resistance, corrosion resistance, anti-aging, high strength, stable size, good water permeability, filtration, and isolation performance, and they are convenient for construction.

Technical Data

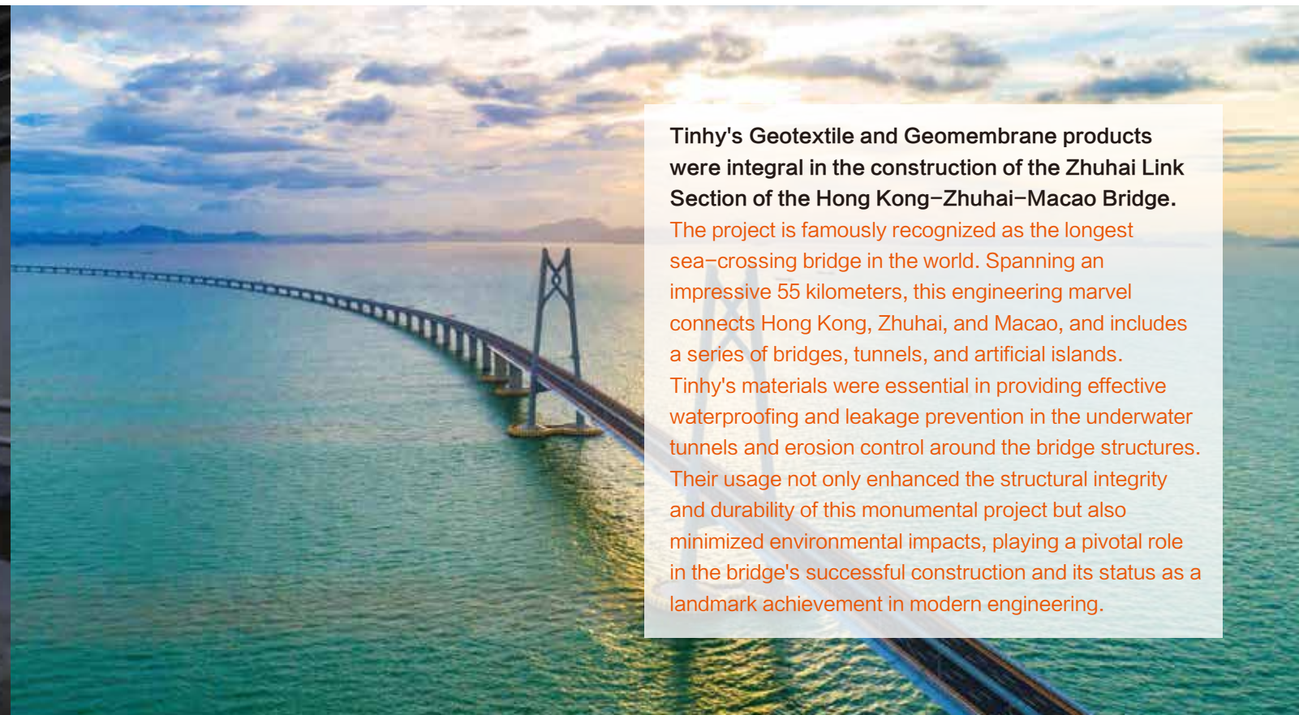
ASTM, GB/T

Specifications

Width: 2m-8m, Weight: 100-800g/m^2
Color: white, black

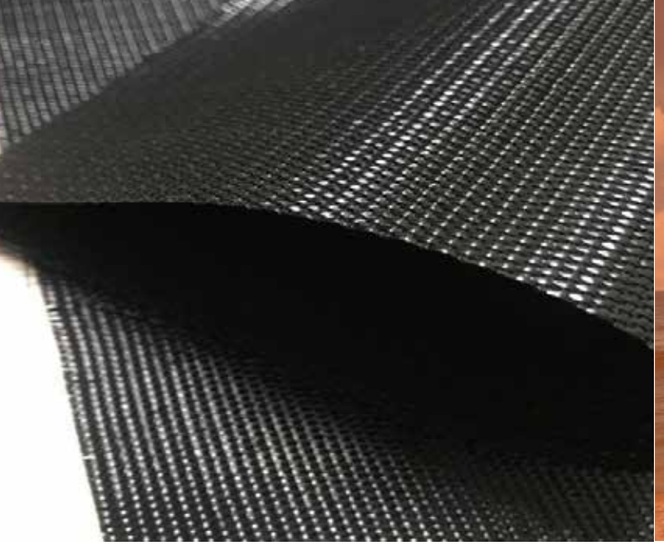
Application

Soil Reinforcement, Erosion Control, Drainage and Filtration, Asphalt Overlay, Protection of Geomembranes, Road and Railway Construction, Slope Stabilization, Sediment Control, Landfill Lining and Capping, Riprap and Breakwater Construction.



Tinhy's Geotextile and Geomembrane products were integral in the construction of the Zhuhai Link Section of the Hong Kong-Zhuhai-Macao Bridge.

The project is famously recognized as the longest sea-crossing bridge in the world. Spanning an impressive 55 kilometers, this engineering marvel connects Hong Kong, Zhuhai, and Macao, and includes a series of bridges, tunnels, and artificial islands.
Tinhy's materials were essential in providing effective waterproofing and leakage prevention in the underwater tunnels and erosion control around the bridge structures. Their usage not only enhanced the structural integrity and durability of this monumental project but also minimized environmental impacts, playing a pivotal role in the bridge's successful construction and its status as a landmark achievement in modern engineering.



PP Woven Geotextile

Product Description

Tinhy woven geotextile is made of PP fiber, which has high strength, durability, corrosion resistance, water permeability, and they are convenient for construction.

Technical Data

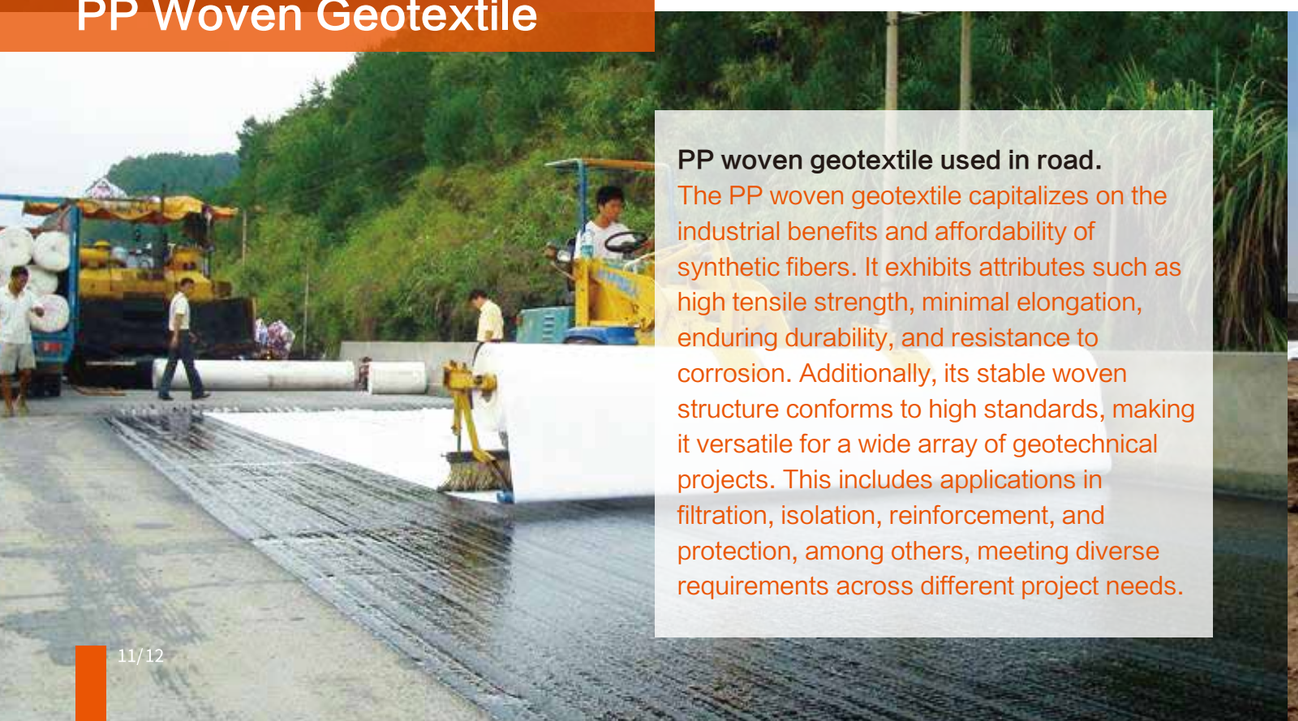
ASTM, GB/T

Specifications

Width: 2m−6m, Weight: 200−1500g/m^2, Color: black, white

Application

Dam, railway, road, tunnel, soft soil foundation treatment



PP woven geotextile used in road. The PP woven geotextile capitalizes on the industrial benefits and affordability of synthetic fibers. It exhibits attributes such as high tensile strength, minimal elongation, enduring durability, and resistance to corrosion. Additionally, its stable woven structure conforms to high standards, making it versatile for a wide array of geotechnical projects. This includes applications in filtration, isolation, reinforcement, and protection, among others, meeting diverse requirements across different project needs.

Composite Geomembrane

Product Description

Tinhy composite geomembrane is a geosynthetic material made of geotextile (nonwoven fabric, woven fabric) and polymer material (HDPE/LLDPE/EVA), which is calendered and hot melted. It combines the benefits of both geomembrane and geotextile, which removes the needs for protection layer, it has the properties of high tensile strength, tear resistance, high bursting strength, root penetration resistance,anti−aging, etc. It has the benefits of fast stress dispersion, small displacement, fast construction and low cost.

Technical Data

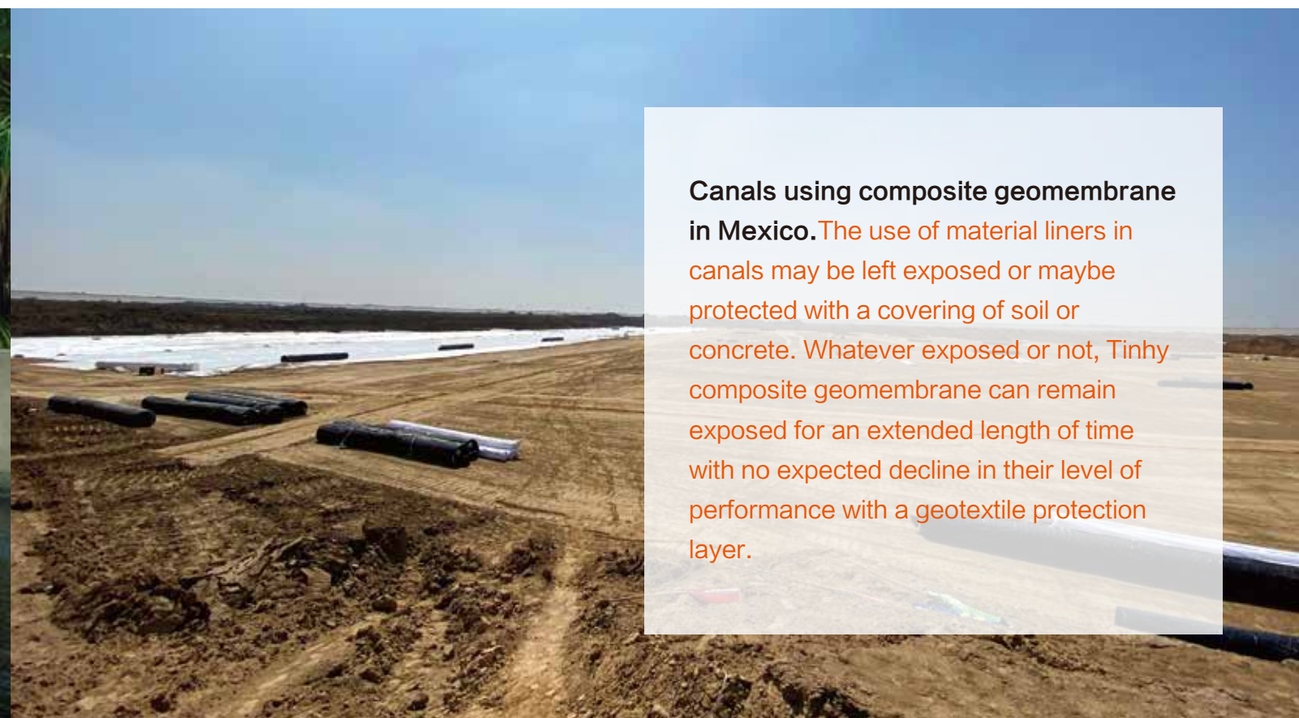
ASTM, GB/T, CJ/T

Specifications

Fabric material: PET、PP Color: black, white
Width: 2m−7m, Weight: 200−3500g/m^2

Application

Canal and Pond Linings, Road and Railway Construction, Mining Applications, Water Containment and Treatment, Erosion Control, Aquaculture Ponds, Agricultural Applications, Tunnel and Underground Construction



Canals using composite geomembrane in Mexico. The use of material liners in canals may be left exposed or maybe protected with a covering of soil or concrete. Whatever exposed or not, Tinhy composite geomembrane can remain exposed for an extended length of time with no expected decline in their level of performance with a geotextile protection layer.

Composite Geomembrane

Geosynthetics Clay Liner (GCL)

Product Description

Tinhy GCL is filed with high-expansion sodium bentonite between the woven and non-woven fabric.The upper non-woven fabric is used to lock the bentonite to the lower composite woven fabric through special knitting method, so that the bentonite particles cannot flowi in any direction. When water is encountered, a uniform high-density rubber head water layer is formed in the mat to seal, isolate and prevent leakage.

Technical Data

ASTM, JG/T

Specifications

Width: 6m, Weight: 4000-8000g/m^2

Application

Landfill Liners and Caps, Protection Layer of a Hazardous Waste Site, Water Reservoirs and Canals, Wetland Restoration, Roadway and Railway Construction, Erosion Control, Mining Applications, Foundation Barriers

On-Site Accessories

Welding Machine

Hand Extruder Welding Gun

Hot Air Welding Gun

Welding Rods

E-type Polylock

HDPE Tub

Sewing Machine

Waterstop Strip

GCL With Membrane

Product Description

This product combines the robust impermeability of a high-density polyethylene(HDPE) membrane with the natural sealing properties of bentonite clay, creating a formidable barrier against water and contaminants.

Technical Data

ASTM, JG/T

Specifications

Width: 6m, Weight: 4000-8000g/m^2

Application

GCL with an added membrane layer are both used in containment and barrier applications, with the key difference being the membrane's enhanced impermeability and durability, making them ideal for more demanding applications such as high-pressure water environments, contaminated site remediation, and critical infrastructure protection.

Double-locking Edges GCL

Product Description

Tinhy's double-locking edges GCL innovatively builds upon the standard GCL design by incorporating two slits at the junction of two GCL pieces. When exposed to water, the bentonite in the GCL automatically precipitates, forming a seal at the joint. This design with two blocking lines significantly enhances the waterproofing effectiveness of the splice, providing a more reliable and efficient barrier in various applications.

Technical Data

ASTM, JG/T

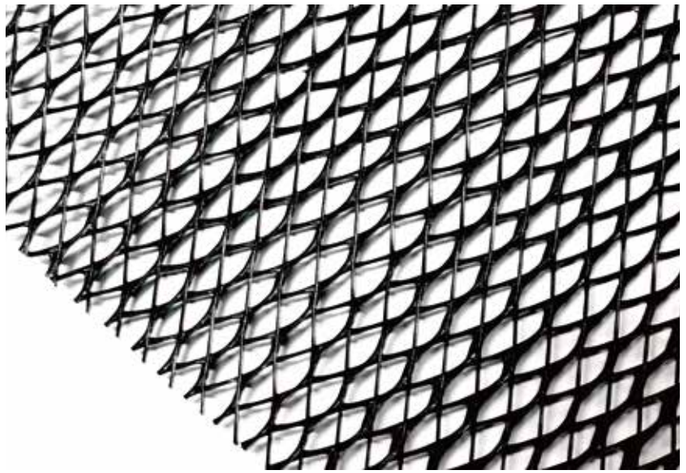
Specifications

Width: 6m, Weight: 4000-8000g/m^2

Application

GCL with double-locking edges is specifically designed for enhanced waterproofing in applications such as landfill liners and containment areas, where it forms a self-sealing, reinforced barrier at the joints for superior protection against leakage.

Geo-Composite Drainage Net



Product Description

Our Geo-Composite Drainage System is a premium, multi-layer solution designed to provide efficient water drainage and soil filtration in various civil engineering applications.This innovative system combines a three-dimensional, high-density polyethylene(HDPE) drainage net core with non-woven geotextile layers on both sides. This configuration offers excellent water flow rates while preventing soil particles from clogging the drainage pathway.

Technical Data

ASTM, CJ/T, JT/T

Specifications

Width: 5m, Weight: 750-1600g/m^2

Application

Landfill Drainage and Gas Venting, Green Roof Drainage Systems, Retaining Wall Drainage, Foundation Wall Drainage, Under-Slab Drainage in Buildings, Capillary Break Layers in Construction, Sports Field Drainage, Erosion Control on Slopes, Tunnel and Underground Structure Drainage

In Sri Lanka, thermal power plant has been utilizing Tinhy's lining systems. The system includes GCL, geomembrane, and geotextile, for over 10 years. Tinhy Geosynthetics were selected for their premium grade material, enriched with antioxidant additives and UV stabilizers, and their high chemical resistance, ensuring a prolonged lifespan in the demanding power plant environment.

Landfill using Geo-composite drainage net in AU. The three-dimensional composite drainage net, primarily employed in landfills and reservoirs, serves as a crucial tool for groundwater drainage, particularly in areas where high groundwater levels can threaten the integrity of anti-seepage liners. By effectively channeling away rising groundwater, this drainage layer safeguards the liner from damage. This innovative solution, replacing traditional sand and gravel layers, consists of a double-sided plastic mesh coupled with a seepage geotextile. Its application extends to draining landfills, tunnels, and railway and highway transportation infrastructure projects, where ensuring safe drainage is essential.

Geo-Composite Drainage Board

Product Description

Tinhy's drianage board, crafted from high-strength PET geotextile and high-density polyethylene drianage board, is fused together through a unique heat fusion process. This integration endows it with distinctive capabilities such as consistent filtration, rapid drainage, root resistance, and waterproofing. Coupled with mature, straightforward installation solutions, it offers top-tier safety protection. This makes it ideal for a variety of applications including landfill slopes and bottoms, landfill gas barriers, drainage layers, roof greening, and the drainage of underground building sidewalls, floors, and tunnels.

Technical Data

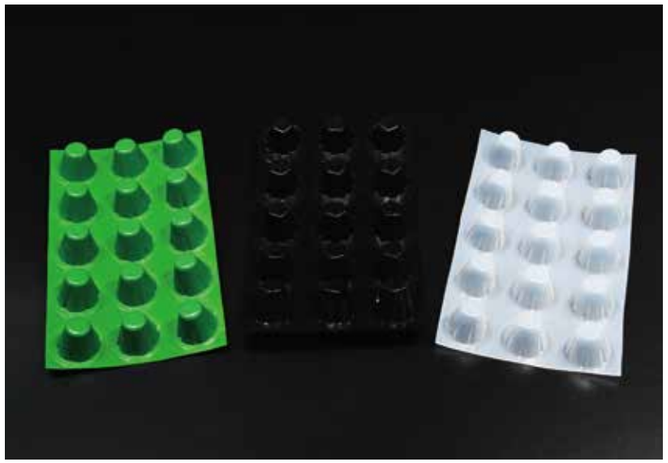
ASTM, GB/T

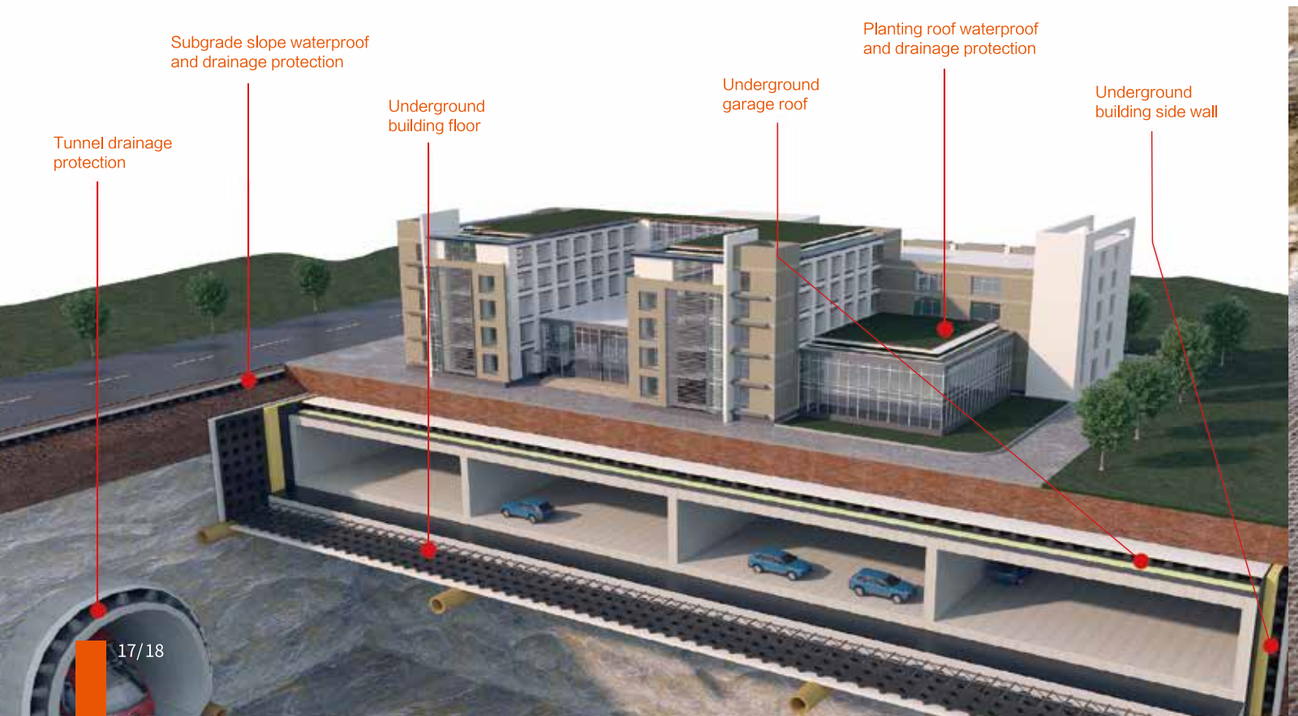
Specifications

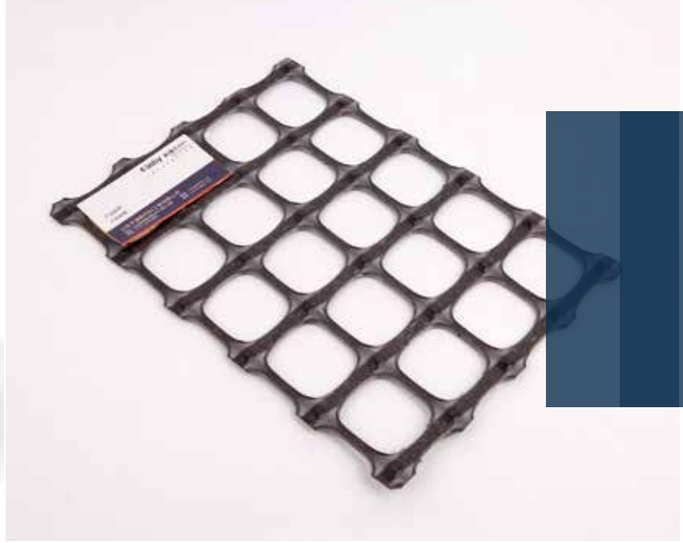
Width: 2m-5.4m,
Weight: 200-1500g/m^2
Color: white, Green, Black

Application

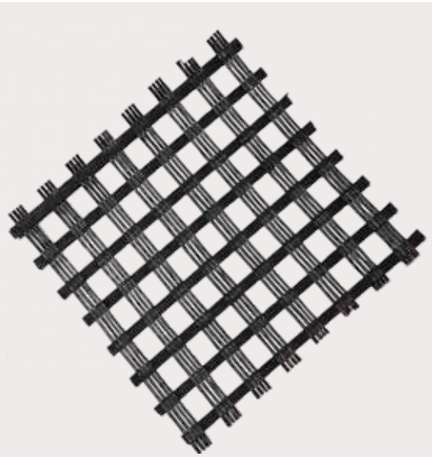
As illustrated in the rendering image provided below.







Geogrid



Product Description

Tinhy's plastic geogrid comes in both uniaxial and biaxial varieties, crafted from high-molecular polymer using a process of extrusion, forming, and punching, followed by stretching in both longitudinal and transverse directions. This geogrid boasts significant tensile strength along both axes, offering an optimal chain system for more efficient force containment and diffusion.

Technical Data

ASTM, GB/T

Specifications

TGSG-15,TGSG-20,TGSG-25,
TGSG-30,TGSG-35,TGSG-40,
TGSG-80,TGSG-110,TGSG-120

Application

Roadbed Reinforcement in Road Construction, Slope and Embankment Stabilization, Railway Track Bed Stabilization, Reinforcement of Retaining Walls, Airport Runway and Taxiway Stabilization, Pavement Optimization and Extension of Lifespan, Subgrade Stabilization in Soft Soil Areas, Erosion Control for Riverbanks and Shorelines, Foundation Stabilization in Building Construction

The geogrid used in Russia roadbed. Geogrids are primarily employed in roadbed construction, reinforcing soft soil projects like roads and railways, as well as in slope protection. They significantly improve the load-bearing capacity of soft soil foundations, prevent surface cracks and collapses, offer convenient construction, and help in reducing maintenance costs.

Geocell

Product Description

Tinhy's geocell is a three-dimensional, honeycomb-like structure made from reinforced HDPE sheets, welded for high strength. This product is lightweight, durable, and chemically stable, boasting resistance to light and oxygen aging, as well as to acidic and alkaline environments. It offers significant lateral restraint, is slip-resistant and anti-deformation, and flexibly expands and contracts, making it easy to connect and install.

Technical Data

ASTM, GB/T

Specifications

TGLG5, TGLG8, TGLG10, TGLG15, TGLG20

Application

Soil Stabilization in Road Construction, Erosion Control on Slopes and Embankments, Retaining Wall Construction, Channel and Riverbank Protection, Ground Reinforcement in Parking Areas and Driveways, Landscape and Greening Projects, Reinforcement in Pipeline and Sewer Systems, Stabilization of Landfills and Waste Sites

Quality Control
R & D

- The testing laboratory spans a 1500 square meter area
- Equipped with over 18 advanced testing instruments
- Staffed by inspectors holding national training certificates
- Capable of conducting a wide range of quality assurance tests and assessments
- Accredited with ISO, China Environmental, CRCC Railway, and CE certifications
- Undergoes regular monthly supervision and audits by third-party organizations

Geocell used on roadbed. It expands and contracts freely, can be folded up during transportation, and expanded and filled with earth, stone or concrete during use, forminga structure with strong lateral restrictionsand large rigidity. It can be used as acushion to deal with weak foundations to increase the bearing capacity of the foundation. It can also be laid on slopes to form slope protection structures, and can also be used to build retaining structures.

Best Quality

Our skilled team utilizes top-notch equipment and premium resins to produce quality products for our customers. We are dedicated to offering first-class services to meet your needs with excellence and precision. Trust in Tinhy for quality and professional service.

Attention To Detail

The superiority of our products is evident in the meticulous attention to detail, and our state-of-the-art machinery ensures high-quality output through automated processes. Trust in our commitment to excellence in every aspect of our production.

R&D

Established Geosynthetics Application Technology R&D Center

Established an industry-university research platform with global top engineering schools

Equipments

Equipped with the nation's leading professional inspection and testing equipment

Team

Ten external professors of polymer materials

Created a professional R&D tearn of more than 30 people

Construction Experts

Tinhy stands as a pioneer in standardizing anti-seepage practices in China's geosynthetics sector. As a leader in the construction of geosynthetics projects, Tinhy Geosynthetics consistently sets the benchmark with its professionalism, innovation, and industry leadership.

The only one in China with international welder certificates issued by the International Geotechnical Material Installation Association