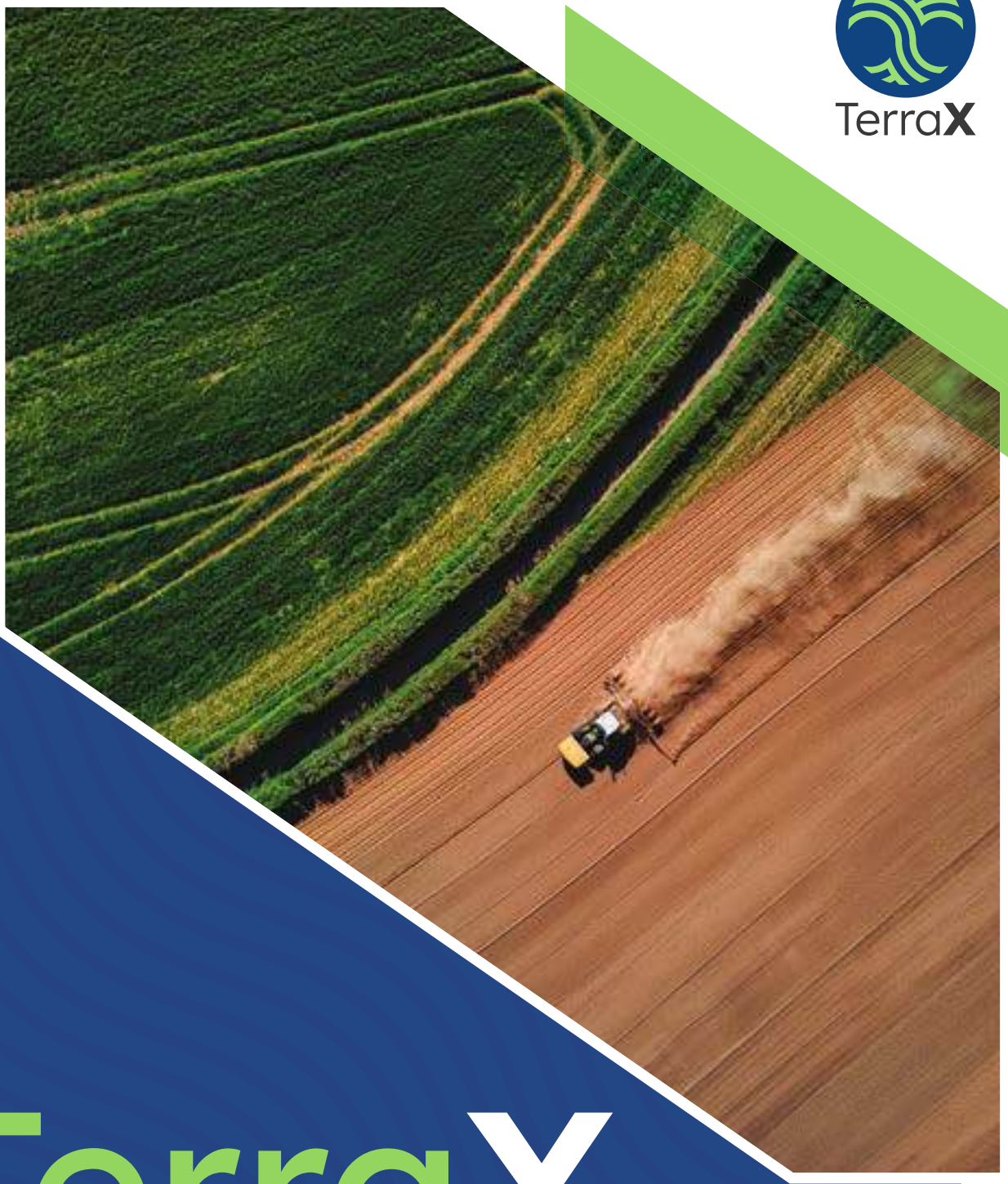
TerraX



TerraX Geo

Membranes
Textiles
Tubes
Composites

ผู้แทนจำหน่ายโดย **บริษัท ตะวันไพพ์ จำกัด** | โทร **091-169-5732** | **www.tawanpipe.co.th** | E-mail : **tawan@tawanpipe.co.th**

OUR GEOSYNTHETICS

"Unparalleled value - Local Wisdom, Global impact"

At TerraX, we combine industry-leading quality, raw materials, and manufacturing techniques from industry leaders like Solmax, GSE, and Tencate with a lean process and localized expertise. This unique approach allows us to provide clients with unparalleled quality and affordability, understanding the needs of local businesses and delivering value without compromise.

STANDARDS

Our products meet and exceed industry standards.
TerraX HDPE Liner: ASTM GRI GM13. We use 100% virgin materials from Chevron Phillips Marlex and Cabot Masterbatch.
TerraX Tubes: Tensile up to 350kN/m, Size up to 200x200m. 25+ yr use.
TerraX Mattress: Tensile up to 100kN/m, Thickness up to 500mm.

MANUFACTURING

Ensuring quality is at the core of our operation. Every roll of Geosynthetics undergoes rigorous testing using cutting-edge equipment: Digital Bursting Strength Tester, Geotextile Thickness Gauge, Dynamic Geotextile Puncher, Comprehensive Strength Tester of Geotextile, Kinematic Viscosity Gauge Of Oil Products, Chemical Fiber Filament Strength Tester, Environment-resistant Stress Cracker, OIT Analyzer, YT3500-type Carbon Black Content Tester, Special Geomembrane Strength Tester, Universal Material Testing Machine.

QUALITY ASSURANCE

We conduct randomized tests, after production, on our stock to ensure consistent excellence. Our geomembranes consistently match industry leaders in key properties, for example, tensile strength, durability, and longevity.

HDPE Smooth Liner



Characteristics

Impermeable HDPE sheet

Flexible and widely used

Minimal/no welding installation

HDPE chemical resistance

Up to 30 years lifespan

GRI GM13 Standard

Smooth waterproofing high-density polyethene with a uniform surface, thicknesses, and properties. Simple installation with an extrusion welding wire from TerraX Geo.

SPECIFICATIONS

- Thickness: 0.3 mm to 2.00 mm
- Width: 7m, 8m or custom
- Length: 100m, 200m or custom

ACCESSORIES

- TerraX Geo® welding wire

HDPE Extrusion welding wire with excellent weldability made for TerraX Geo membranes. Available in 4mm.

- Portable welding machine TH-501 OPTIONAL

The perfect cost-effective choice, delivering exceptional value to meet your welding needs.

FUNCTIONS

Impermiable Barrier

Containment

APPLICATIONS

- Agriculture
- Aquaculture
- Biogas
- Channels and rivers
- Environmental protection
- Floating covers
- Landfills
- Mining
- Reservoirs and ponds

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TerraX HDPE Smooth Liner
SPECIFICATION

Property	Test Method	Frequency	Metric	Mininum Avarages					
Thickness (min. avg.)	ASTM D5199	Roll	mm	0.30	0.50	0.75	1.00	1.50	2.00
Thickness (min.)				0.68	0.90	0.68	0.90	1.35	1.80
Resin Density	ASTM D1505	Batch	g/cc	> 0.932					
Melt Index - 190°C/2.16 kg (max.)	ASTM D1238		g/10 min	1.0					
Density	ASTM D792	per 10 rolls	g/cm³	≥ 0.940					
Carbon Black Content	ASTM D4218	per 2 rolls	%	2.0 - 3.0					
Carbon Black Dispersion	ASTM D5596	per 10 rolls	Category	Cat. 1 / Cat. 2					
OIT - Standard (min. avg.)	ASTM D3895	Batch	min	100					
Tensile Properties (min. avg)	ASTM D6693	per 2 rolls							
Strength at Yield			kN/m	11.6	15	11.6	15	23	31
Elongation at Yield			%	13	13	13	13	13	13
Strength at Break			kN/m	21	28	21	28	43	57
Elongation at Break			%	700	700	700	700	700	700
Tear Resistance (min. avg.)	ASTM D1004	per 5 rolls	N	93	125	93	125	187	250
Puncture Resistance (min. avg.)	ASTM D4833			267	356	267	356	534	695
Dimensional Stability	ASTM D1204	Certified	%	± 2					
Stress Crack Resistance (SP-NCTL)	ASTM D5397	Batch	hr	500					
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation							
OIT - Standard (min. avg.)	ASTM D3895		%	55					
HP-OIT (min. avg.)	ASTM D5885		%	80					
UV Resistance - % retained after 1,600 hr	ASTM D7238								
HP-OIT (min. avg.)	ASTM D5885		%	50					
Low Temperature Brittleness	ASTM D746	Certified	°C	-77					

Oven Aging and UV Resistance are tested under GRI GM 13 meeting and exceeding the standard

PRODUCT DATA							
Thickness	mm	0.30	0.50	0.75	1.00	1.50	2.00
Width	m	7 or 8					

Note: All rolls are supplied with two slings. Rolls are wound on 6” core. Special length available upon request. Roll length and width have a tolerance of ±1%. The weight values may change due to project specifications (i.e. absolute minimum thickness or special roll length) or shipping requirments (i.e. international containerized shipments). All information, recommendations and suggestions appearing in this literature concerning the use of our products are based upon tests and data believed to be reliable; however, it is the users responsibility to determine the suitability for their own use of the products described herein.

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Nonwoven Geotextiles



Characteristics

Permeable polypropylene fibers

Flexible and widely used

High puncture/ tear resistance

PP chemical resistance

High permittivity

Lightweight

Permiable non woven polypropylene fiber sheet with uniform properties, rough surface and regular thickness. Machine-free installation.

SPECIFICATIONS

- Thickness: 0.3 mm to 2.00 mm
- Mass per unit area: 100g/m'-800g/m'
- Length: 100m, 200m or custom

STANDARDS

- GB/T 17638 Short fiber needle punched nonwoven
- CJ/T 430 Nonwoven fabrics for landfill sites
- QJCR S49.5 Geosynthetics for railway engineering
- JTJ/T019-98 Highway Geosynthetics

FUNCTIONS

Separation/ Protection

Permiable Drainage

Filtration

APPLICATIONS

- Channels and rivers
- Environmental protection
- Gravel/ soil reinforcement
- Infrastructure
- Landfills
- Mining and Fracking waste
- Reservoirs and ponds

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Geotubes



Characteristics

Permeable polypropylene yarns

Flexible and widely used

High strength/ durable

PP chemical resistance

High permittivity

Easy/ fast installtion

Woven and nonwoven high tenacity polypropylene multiflament yarns or flat monofilament yarns in a tube shape with an inlet. Optimal pore size for best retention property of fine particles. Simple and fast installation compared to traditional alternatives.

Available in 1 and 2 layers. Color comes in standard white or sand yellow.

SPECIFICATIONS 1 LAYER

- Tensile strength: 50/50 to 350/350 kN/m
- Diameter: 1.0m to 8.0m
- Circumference: 5m to 60m
- Length: 20m to 200m

SPECIFICATIONS 2 LAYERS

- Tensile strength: 60/60 to 200/200 kN/m
- Diameter: 1.0m to 8.0m
- Circumference: 5m to 60m
- Length: 10m to 60m

FUNCTIONS

Erosion Protection

Particle Confinement

Filtration

APPLICATIONS

- Breakwater/ dikes/ offshore structures
- Bank/ coastal erosion protection
- Land reclamation
- Silt curtains
- Dewatering, sediments isolation
- Mining, industrial sludge isolation

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Concrete mattress



Characteristics

Concrete mattress

Lightweight

Flexible

Concrete erosion protection

Cost effective

Easy/ fast installtion

Woven fabrics in a mattress shape with an inlet for cement to be pumped in on-site. Concrete hardens within 24-48 hours. Can be installed underwater or in high flow rate conditions, such as a river. Simple, cost effective, and fast installation compared to traditional rip-rap or concrete slabs.

Contains optional unfilled areas that allow vegetation, once the concrete sets. areas without concrete can be filled with soil and seeds.

SPECIFICATIONS

- Tensile strength: 50 to 100 kN/m
- Thickness: 100mm, 150mm, 200mm, 500mm

FUNCTIONS

Erosion Protection

APPLICATIONS

- Embankment erosion protection Waterways/ dams/ rivers/ canals
- Port and harbor protection

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GCCM



Characteristics

Concrete blanket

Flexible

Concrete erosion protection

Cost effective

Easy/ fast installtion

Machiene-free installation

Woven fabrics in a blanket shape with **dried concrete filling**, ready to use. Unseal packaging and add water to harden the concrete blanket (hardens within 4 hours). Can be installed underwater or in high flow rate conditions, such as a river. Simple, cost effective, and fast installation compared to traditional concrete mixing and application.

SPECIFICATIONS

- Specifications: 50 to 100 kN/m
- Thickness: 100mm, 200mm

FUNCTIONS

Separation/ Protection

Erosion Protection

APPLICATIONS

- Embankment erosion protection drains/ small canals / ponds
- Rural roads
- Walkways
- Flat concrete alternative

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PREVIOUS PROJECTS













The projects displayed feature our products, though not branded under our name. TerraX Geo ensures strict quality control, value, and innovative formulation, setting us apart in meeting client needs.