



Enhancing  
Sustainable  
Development

**GEOSYNTHETICS**



**VALUE | PERFORMANCE | RELIABILITY**

**SPECIALIST IN GEOSYNTHETIC SOLUTIONS**



**ALPHA  
PINNACLE**

## ALPHA® RANGE OF GEOSYNTHETICS

Alpha Pinnacle Sdn Bhd is a leading specialist in geotechnical and environmental solutions. We are a 100% Malaysian-owned company who partners and supports contractors and design engineers to meet engineering challenges with the right geosynthetic materials. Our team are well-versed with designs and solutions incorporating advanced geosynthetics so you can save valuable time for your projects.



### When you need an End-to-End Solution

We care that you select the right materials for your application. With our reliable geosynthetics and a team well-versed with localized conditions, Alpha Pinnacle is geared to partner or support your projects with a full suite of services.



#### Comprehensive range

Wide range of high-performance materials for challenging soils



#### Widely Used


Selected choice engineers and designers trust. Widely used in various applications



#### Design support

Depending on the project, conceptual proposal to full project design available

#### Wide range of geosynthetics for various applications

 Road engineering, railway engineering

 Slope protection, retaining walls

 Erosion control

 Environment protection (landfill and containment)

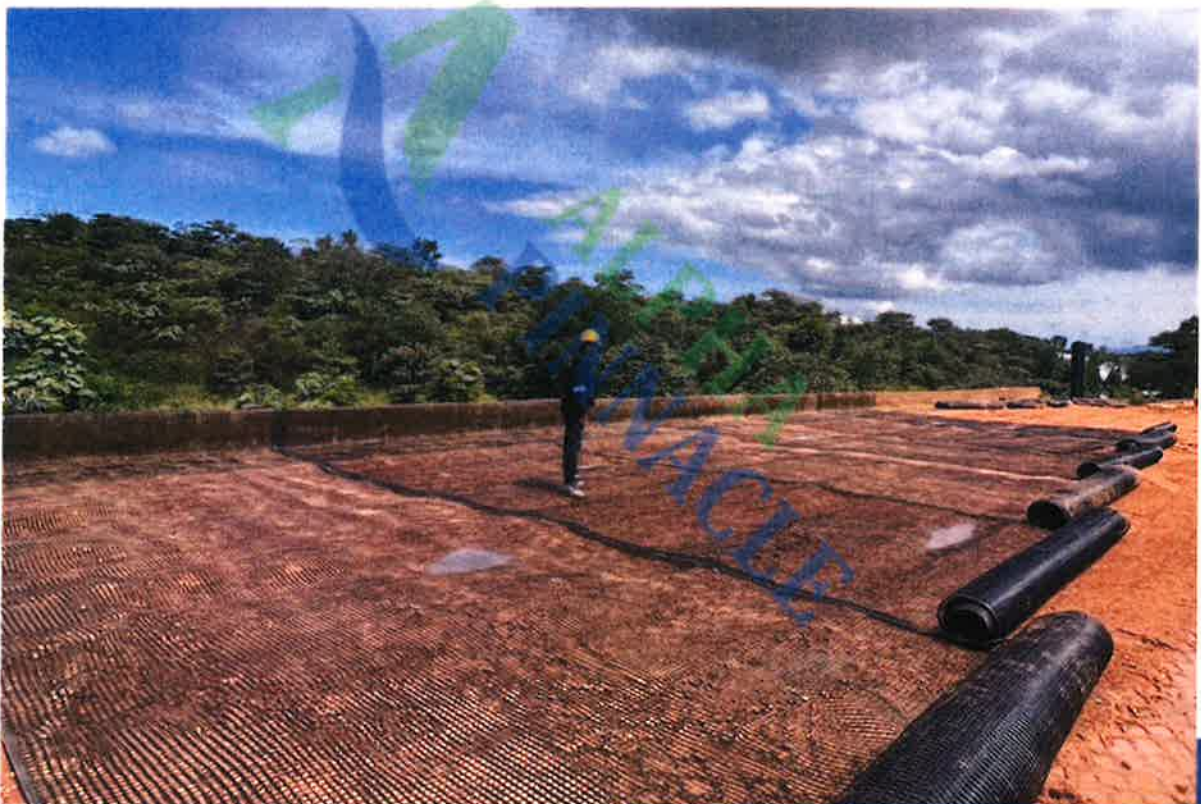
 Hydraulic Engineering (river, coastal protection)

 Site containment



## ALPHA® GRIDS (GD SERIES)

ALPHA® Grids (GD series) are reinforcement geogrids offering high tensile strengths with low elongations, when building a reinforced wall or slope. Designed to ensure high interlocking mechanism and soil interaction, the grids come with coating for high resistance against chemical and biological elements in soil environments, with minimal installation damage.



### ALPHA® Grids Uses

Alpha Pinnacle's Green- Engineered Reinforced Soil Slope ('GERSS')

Long term soil reinforcement in application for retaining walls, steepened reinforced slopes, vertical landfill structures and segmental block reinforcement

### Unique Features

- High tensile strength at low creep performance
- High resistance to chemical and biological, and installation damage
- Excellent pull-out and interface friction behaviour
- Superior connection capacity with segmental blocks



**ALPHA  
PINNACLE**

**ALPHA® COMPOSITE (RT SERIES)**



Looking for sustainable solutions for your retaining wall?  
Reach out to us for ideas and expert recommendations.



## **ALPHA® Composite Reinforcing Textile Uses**

Drainage can be a key design consideration in reinforced wall and soil slope structures.

Designers select ALPHA® Composite to reinforce soil and reduce excess pore-water pressures. Most suitable when you want excellent reinforcement and in-plane drainage performance all in one product for fast installation.

## **ALPHA® Grids and ALPHA® Composite Benefits**

- Easy installation
- Economical solution
- Use of suitable in-situ fill materials savings in imports
- Avoid concrete structures for carbon footprint savings
- Long term design stability using certified materials

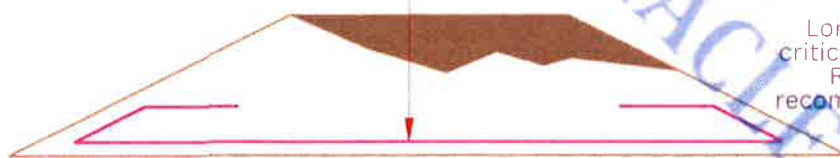


## ALPHA® WOVEN GEOTEXTILE (PET) HS

ALPHA® woven geotextiles (PET) are permeable textile structures produced by interlacing two or more sets of yarns or fibers which provides consistent performance and exceptionally high strengths. The HS series are available from 100 to 1,000 kN/m, when used with soil or other materials form an integral part of long term structure.



Alpha® Woven Geotextile (PET)



Long term design strength is a critical element in road structures. Reach out to us for design recommendation for your project

### ALPHA® Woven Geotextile (PET) Uses

Long term soil reinforcement in applications such as

- basal reinforced embankments over soft soils
- load transfer platform reinforcement
- reinforcement over sinkholes
- soil slope reinforcements

### Unique Features

- High tensile modulus
- Excellent long term design strength with resistance to creep, durability and installation damage

### Benefits

- Faster construction speed with no loss in stability
- Prevent embankment collapse
- Enhance asset quality and durability

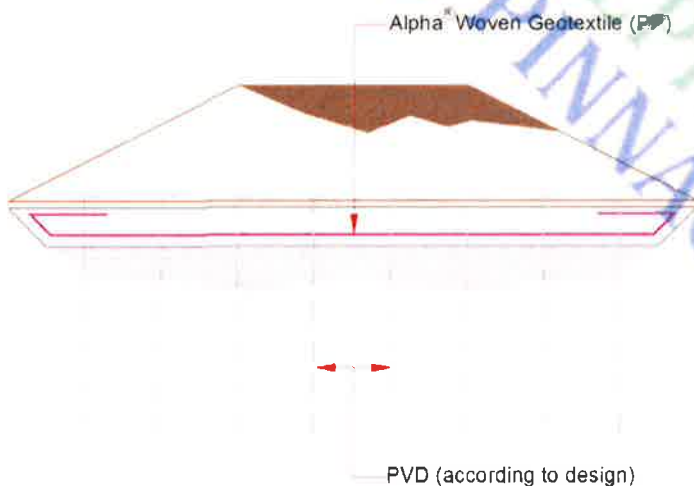


**ALPHA  
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**ALPHA® WOVEN GEOTEXTILE (PP) ST**



Facing access issues? Constructing over very soft soils?  
Reach out to us for solutions to support your project.



## ALPHA® Woven Geotextile (PP) ST Uses

Designers choose the biaxial ST series in roads construction for constructability and access over very soft soils. Offering high tensile stiffness modulus, it is a key element in

- subgrade stabilization
- working platform stabilization

## Unique Features

- Initial tensile stiffness modulus at 2% strain is the key to the performance of this series
- Separation, filtration and reinforcement in a single product

## Benefits

- Structure integrity between soil layers
- Increase ground bearing capacity



# TECHNICAL DATA

<b>ALPHA® Geogrids (GD Series)</b>	<b>Test standard Unit</b>	<b>GD 40</b>	<b>GD 60</b>	<b>GD 80</b>	<b>GD100</b>	<b>GD130</b>	<b>GD160</b>	<b>GD200</b>
Characteristics Short Term Strength (MD)	ISO 10319 kN/m	40	60	80	100	130	160	200
Characteristics Short Term Strength at 5% elongation (MD)	ISO 10319 kN/m	20	30	40	50	65	80	100
Characteristics Short Term Strength (CD)	ISO 10319 kN/m	40	30	30	30	30	50	50
Elongation at Characteristics Short Term Strength (MD)	ISO 10319 %	10	10	10	10	10	10	10
Long Term Design Strength at 120 years design life	BS 8006 kN/m	24	39	49.8	65	80.9	99.6	131

<b>ALPHA® Composite RT</b>	<b>Test standard Unit</b>	<b>RT 55</b>	<b>RT 75</b>	<b>RT105</b>	<b>RT155</b>	<b>RT205</b>
Tensile Strength (MD)	ISO 10319 kN/m	55	75	105	155	205
Tensile Strength (CD)	ISO 10319 kN/m	14	14	14	14	14
Elongation (MD)	ISO 10319 kN/m	10	10	10	10	10
Water Flow	ISO 11058 l/m2/s	70	70	70	70	70
Long Term Design Strength at 120 years design life	BS 8006 kN/m	31.6	44	61.6	90.9	120.2

<b>ALPHA® Woven Geotextile HS PET</b>	<b>Test standard Unit</b>	<b>HS100</b>	<b>HS200</b>	<b>HS300</b>	<b>HS400</b>	<b>HS600</b>	<b>HS800</b>
Characteristics Short Term Strength (MD)	ISO 10319 kN/m	100	200	300	400	600	800
Characteristics Short Term Strength at 5% elongation (MD)	ISO 10319 kN/m	50	100	150	200	300	400
Characteristics Short Term Strength (CD)	ISO 10319 kN/m	50	50	50	50	50	50
Elongation at Characteristics Short Term Strength (MD)	ISO 10319 %	10	10	10	10	10	10
Long Term Design Strength at 120 years design life	BS 8006 kN/m	58.9	117.9	176.9	242	437.9	484

<b>ALPHA® Woven Geotextile ST PP</b>	<b>Test standard Unit</b>	<b>ST 40</b>	<b>ST 65</b>	<b>ST 90</b>
Ultimate Tensile Strength (MD)	ISO 10319 kN/m	40	65	90
Ultimate Tensile Strength (CD)	ISO 10319 kN/m	40	50	90
Elongation at break (MD)	ISO 10319 kN/m	12	12	12
Elongation at break (CD)	ISO 10319 kN/m	10	10	10
CBR Puncture	ISO 12236 N	4000	6000	9000

Properties are typical values and correspond to average values derived from in-house and accredited lab testing.

Information provided is intended as general guide and for selected grades only. Please contact us for more information. In line with a policy of continuous improvements or optimization, the information provided may change without notice.

Reach out to us, for better solutions together

[www.alphapinnacle.com](http://www.alphapinnacle.com)

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Development

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Alpha Pinnacle Sdn Bhd is an ISO-certified company

A member of IGS



CERTIFIED TO ISO 14001:2015  
CERT.NO.:EMS 00876



CERTIFIED TO ISO 9001:2015  
CERT.NO.:QMS 03447



International Geosynthetic Society

Member No. 13527

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