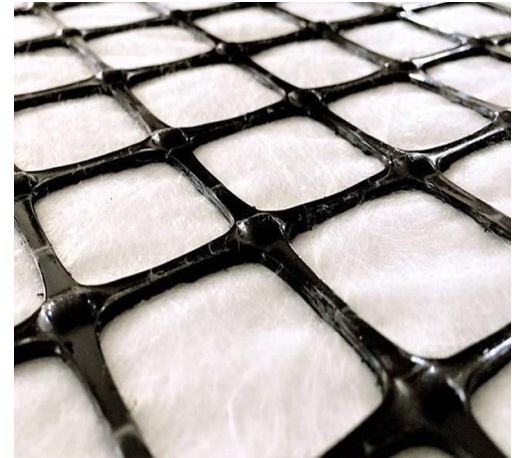


## PP Biaxial Geogrid Composite Geotextile

PP Biaxial Geogrid composite Geotextile is a composite of plastic geogrid combined with non-woven geotextile or fabric through adhesive and hot melting methods. The non woven geotextile surface is rough and not easy to slide during the construction. It enables the reinforced geogrid composite stay smooth in the process of paving. It is a kind of innovative composite geosynthetic materials, which organic combining the excellent performance of geogrid and geotextile. This product can be designed according to actual requirement.

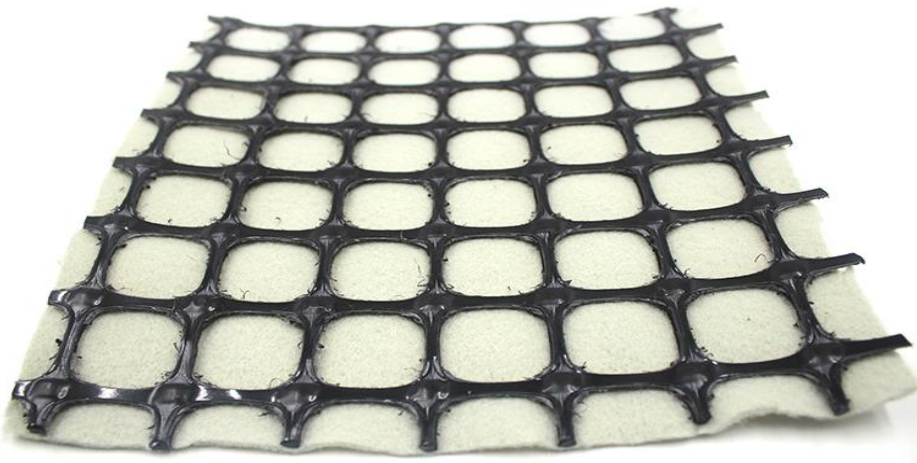
PP Biaxial geogrid composite geotextile has the characteristics of high tensile strength, small elongation, and uniform vertical and horizontal deformation. At the same time, it has excellent characteristics such as high water permeability, filterability and water resistance.

The products has high intensity, low elongation ratio, thermostable, high module, light weight, good toughness, anti-corrosive, long life and so on characteristics, and can be applied in the old cement road surface, runway's service, the dike, the river bank, the side slope protection, project domains and so on road bridge connection surface enhancement processing. It can reinforce the road surface and prevents the road surface rut fatigue cracking the hot-cold expansion crack and the following reflection crack, and can scatter the road surface bearing stress, extense road surface service life, the high tensile strength and the low elongation ratio, no long-term slow change. The physical chemistry stability and hot-stability are good, anti-wear dehisence, anti-low temperature shrinkage crack and postpone reduction reflection crack.



### PP Biaxial Geogrid Composite Geotextile Features:

- High physical and mechanical properties such as tensile strength, tear resistance, and burst resistance.
- The steel-plastic belt and geotextile are welded into a whole, which has anti-seepage function.
- Because it uses polymer materials and adds anti-aging agents in the production process, it can be used in high temperature environments.
- The bearing capacity of the foundation is greatly improved, and after the grid and geotextile are combined, the geotextile makes up for the lack of integrity of the grid, and the grid makes up for the lack of tension and elongation of the geotextile. The composite grid geotextile can be widely used Water conservancy, municipal administration, construction, transportation, subways, tunnels, environmental protection, etc.
- It has high strength, small creep, adapts to various environmental soils, and can fully meet the use of tall retaining walls in high-grade highways.



[PP Biaxial Geogrid Composite Geotextile]

Composite PP Biaxial geogrid are manufactured by heat bonding a polypropylene biaxial geogrid to a needle punched nonwoven geotextile. They combine reinforcement of problematic soils with the additional functions of separation and filtration. Its design allows the biaxial geogrid to create a strong mechanical interlock with the aggregate and for the nonwoven geotextile to filter and separate the soil.

Geomembrane Products:PP Biaxial Geogrid Composite Geotextile

## APPLICATION

PP Biaxial Geogrid Composite Geotextile has high intensity, low elongation ratio, thermostable, high module, light weight, good toughness, anti-corrosive, long life and so on characteristics, and can be applied in the old cement road surface, runway's service, the dike, the river bank, the side slope protection, project domains and so on road bridge connection surface enhancement processing.

It has the excellent properties of geotextile and grid. The product has the characteristics of high tensile strength, low elongation, and has the characteristics of geotextile. It has the properties of cloth, so this product can be used for reinforcement, isolation and protection of high-standard roads, railways, mines, dams, etc, and has a three-dimensional overall direction and level of good water gathering and water merging effects.

## SPECIFICATIONS OF PP BIAxIAL GEOGRID COMPOSITE GEOTEXTILE

PP Biaxial Composite Geogrid								
Dimensions	Test Method	Unit	PPBG2020		PPBG3030		PPBG4040	
			MD	TD	MD	TD	MD	TD
Aperture Dimensions	–	mm (in)	35 (1.4)	35 (1.4)	34 (1.3)	34 (1.3)	33 (1.3)	33 (1.3)
Minimum Rib Thickness	ASTM D 1777	mm (in)	1.5 (0.06)	1.1 (0.04)	2.4 (0.10)	1.5 (0.06)	3.4 (0.13)	2.1 (0.08)
Roll Width	–	m (ft)	3.95 (12.9)/5.95 (19.5)	–	3.95 (12.9)/5.95 (19.5)	–	3.95 (12.9)	–
Roll Length	–	m (ft)	50 (164)	–	50 (164)	–	50 (164)	–
Index Properties								
Polymer	–	–	PP		PP		PP	
Minimum Carbon Black	ASTM D 4218	%	2		2		2	
Tensile strength @ 2% Strain	ASTM D 6637	kN/m (lb/ft)	7 (480)	7 (480)	10.5 (720)	10.5 (720)	14 (960)	14 (960)
Tensile strength @ 5% Strain	ASTM D 6637	kN/m (lb/ft)	14 (960)	14 (960)	21 (1,440)	21 (1,440)	28 (1,920)	28 (1,920)
Ultimate Tensile Strength	ASTM D 6637	kN/m (lb/ft)	20 (1,370)	20 (1,370)	30 (2,050)	30 (2,050)	40 (2,740)	40 (2,740)
Strain @ Ultimate Strength	ASTM D 6637	%	13	13	13	13	13	13
Structural Integrity								
Junction Efficiency	GRI GG2	%	93	93	93	93	93	93
Flexural Rigidity	ASTM D 1388	mg-cm	750,000	–	2,000,000	–	4,800,000	–
Aperture Stability	COE Method	mm-N/deg	0.5	–	0.75	–	0.98	–
<b>Geotextile physical properties</b>	<b>Long filament PET needle punched nonwoven geotextile</b>							
Mass Per Unit Area	ASTM D 5261	g/m <sup>2</sup>	150/200					
Opening Size	ASTM D 451	mm	0.07					

## PROJECTS CASE OF PP BIAxIAL GEOGRID COMPOSITE GEOTEXTILE



[Highway subgrade reinforcement in Liberia]



[Railway subgrade reinforcement in Ghana]

### PP BIAxIAL GEOGRID COMPOSITE GEOTEXTILE CONSTRUCTION

Construction method of Fiberglass Geogrid Composited Geotextile:

- The construction of grid composite geotextile is relatively simple and has very good plasticity.
- Before construction, strict survey and design of road projects are required to determine the location and quantity of geotextiles.
- Then the on-site cutting and arrangement are carried out according to the design requirements, and the soil surface can be covered after treatment.
- During the construction process, you need to pay attention to the tension of the geotextile. It should not be excessively tense or relaxed to avoid affecting the soil.

### APPLICATION OF PP BIAxIAL GEOGRID COMPOSITE GEOTEXTILE:

- (1) Road surface reinforcement of road, railway and a airport road.
- (2) Maintenance, reconstruction and widening of the old road surface.
- (3) Reinforcement of soil roadbed, irrigation channels and water dams.
- (4) Strengthens, the bridge connection surface.



[Reinforcement of expressway in Senegal]

