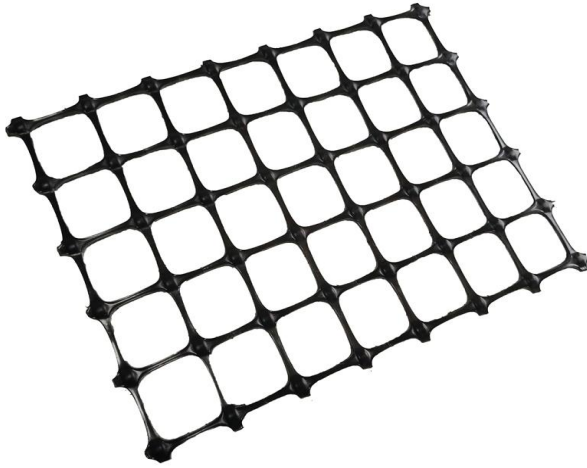


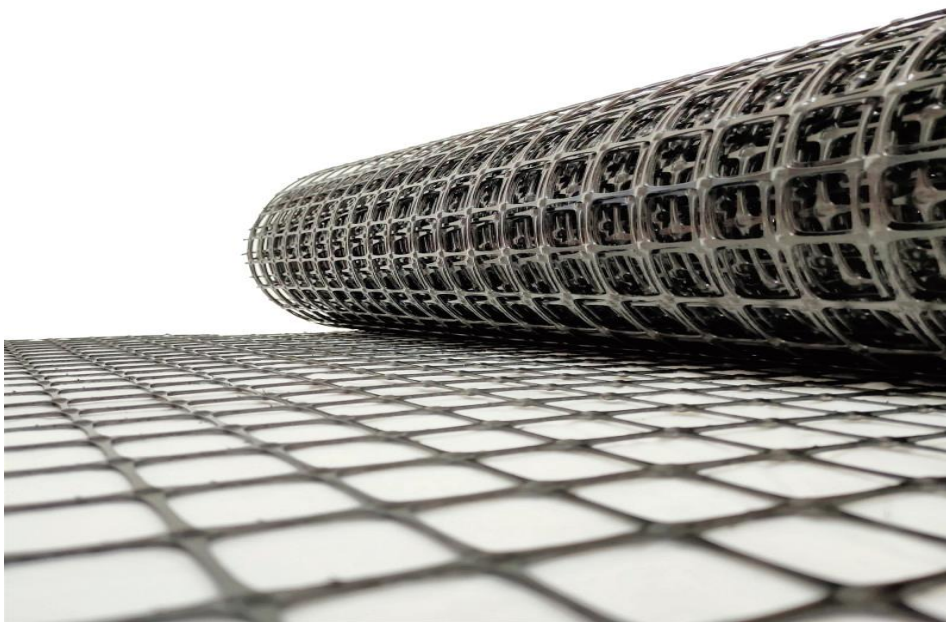
Biaxially stretched PP geogrid



Biaxially stretched polypropylene geogrid is made of high molecular polymer, which is plasticized and extruded into sheets, punched, heated and then stretched longitudinally and transversely.

PP biaxial geogrid is a versatile geosynthetic material that offers excellent reinforcement and stabilization properties. With its high tensile strength, durability, and interlocking structure, it is suitable for a wide range of civil engineering applications. Whether it is road construction, slope stabilization, landfill projects, or coastal protection, PP biaxial geogrid provides an effective solution for enhancing soil stability and extending the lifespan of infrastructure projects.

Biaxially stretched plastic geogrids have great tensile strength in both longitudinal and transverse directions. This structure can provide a more effective chain system for bearing and diffusing forces in soil, suitable for large-scale permanent bearing foundation reinforcement.



[Biaxially stretched PP geogrid]

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Biaxially stretched PP geogrid Features:

- **High Tensile Strength:** PP biaxial geogrid is manufactured using a unique extrusion process that ensures high tensile strength in both longitudinal and transverse directions. This allows it to effectively distribute loads and provide stability to the soil.
- **Excellent Durability:** The geogrid is resistant to chemical and biological degradation, making it suitable for long-term applications. It can withstand harsh environmental conditions, including exposure to UV radiation, moisture, and temperature variations.
- **Lightweight and Flexible:** PP biaxial geogrid is lightweight, making it easy to handle and install. Its flexibility allows it to conform to irregular surfaces and accommodate differential settlements without compromising its performance.
- **Interlocking Structure:** The geogrid features an interlocking structure with integral nodes and ribs. This design enhances its load distribution capabilities and prevents lateral movement of the soil particles. It also improves the connection between the geogrid and the soil, increasing its overall stability.
- **Decrease underlayer thickness and save manufacturing cost.**

Geogrid Products: Biaxially stretched PP geogrid

APPLICATION

Suitable for various types of embankment and roadbed reinforcement, slope protection, tunnel wall reinforcement, and permanent bearing foundation reinforcement for large airports, parking lots, docks and freight yards.

PP biaxial geogrid is widely used in road and pavement construction to improve the bearing capacity of weak soils, prevent cracking and rutting, and extend the service life of the infrastructure. The geogrid provides reinforcement to soil structures, such as retaining walls and slopes, preventing soil erosion, and maintaining stability.

SPECIFICATIONS OF BIAXIALLY STRETCHED PP GEOGRID

Index Properties	Test Method	Unit	GG1515	GG2020	GG3030	GG4040
			MDTD	MDTD	MDTD	MDTD
Polymer	--	--	PP	PP	PP	PP
Minimum Carbon Black	ASTM D 4218	%	2	2	2	2
Tensile Strength@ 2% Strain	ASTM D 6637	Kn/m	55	77	10.510.5	1414
Tensile Strength@ 5% Strain	ASTM D 6637	Kn/m	77	1414	2121	2828
Ultimate Tensile Strength	ASTM D 6637	Kn/m	1515	2020	3030	4040
Strain @ Ultimate Strength	ASTM D 6637	%	1310	1310	1310	1310
Structural Integrity						
Junction Efficiency	GRI GG2	%	93	93	93	93
Flexural Rigidity	ASTM D 1388	Mg-cm	700000	1000000	3500000	10000000
Aperture Stability	COE Method	mm-N/deg	646	707	1432	2104
Dimensions						
Roll Width	--	M	3.95	3.95	3.95	3.95
Roll Length	--	M	50	50	50	50
Roll Weight	--	Kg	39	50	72	105
MD denotes Machine direction. TD denotes transverse direction.						

SPECIFICATIONS OF BIAXIALLY STRETCHED PP GEOGRID:GB/T 17689-2008

Project	Tensile yield per linear meter,KN/m≥		Yield elongation,%≤		Tensile force at 2% elongation,KN/m≥		Tensile force at 5% elongation,KN/m≥	
	longitudinal	Horizontal	longitudinal	Horizontal	longitudinal	Horizontal	longitudinal	Horizontal
TGSG15-15	15	15	15	13	5	5	7	7
TGSG20-20	20	20	15	13	7	7	14	14
TGSG30-30	30	30	15	13	10.5	10.5	21	21
TGSG50-50	50	50	15	13	14	14	28	28
Width	1~6m							
Standards	GB/T 17689-2008							

PROJECTS CASE OF BIAXIALLY STRETCHED PP GEOGRID



[Cement pavement renovation in Ethiopia]



[Landfill Application in Sudan]

BIAXIALLY STRETCHED PP GEOGRID CONSTRUCTION

Construction method of geogrid:

- The paving surface of the geogrid should be relatively flat. After the paving layer has passed the acceptance inspection, in order to prevent longitudinal skew, first draw a white line or a hanging line on the paving layer according to the width, and then the paving can begin. Fix the ends of the grille with iron nails (8 nails per meter wide, fixed at even distances).
- After fixing the ends of the grille, use a paving machine to slowly pull the grille forward. Manually tighten and straighten it every 10 meters until one roll of grille is laid, and then lay the next roll. Volume, the operation is the same as before.
- After paving one roll, use a 6T-10T roller to roll it from the starting point in the forward direction. (If it is paved on the mid-surface layer and leveling layer, it is better to use a steel roller roller; if the grid is laid directly on the concrete pavement, it is better to use a rubber roller roller.).
- Joint paving: The unit of roll length is used as the paving section length. After the section length that should be paved with grating is covered, the overall paving quality is checked again, and then the next section is paved.
- When paving the next section, the grid and grating can be overlapped with a length of 10-15CM and fixed with iron nails or wooden wedges before continuing to pave the second section in the forward direction. By analogy, the operation requirements are the same as before.

- Road and Pavement Construction: PP biaxial geogrid is widely used in road and pavement construction to improve the bearing capacity of weak soils, prevent cracking and rutting, and extend the service life of the infrastructure.
- Landfill and Mining Applications: PP biaxial geogrid is used in landfill and mining applications to enhance the stability of the soil, control soil erosion, and prevent the migration of contaminants.
- Retaining Walls and Slope Stabilization: The geogrid provides reinforcement to soil structures, such as retaining walls and slopes, preventing soil erosion, and maintaining stability..
- Railway and Airport Construction: The geogrid is employed in railway and airport construction to improve the load-bearing capacity of the subgrade, reduce settlement, and increase the overall performance of the infrastructure.
- Coastal and Riverbank Protection: PP biaxial geogrid is utilized in coastal and riverbank protection projects to prevent erosion, stabilize the soil, and provide long-term stability to the shoreline.

