

Biaxial Plastic Geogrid (PicoGrid B™)

(1) Product Definition



Material & Craft

Crafted from high-quality Polypropylene (PP) or HDPE via extrusion, punching, and biaxial stretching. This process yields a high-performance geosynthetic material with balanced tensile strength in both machine and cross-machine directions.



Interlocking Structure

Features a precise square aperture design that mechanically interlocks with soil and aggregate particles. This interlock distributes loads uniformly across the soil-aggregate matrix, enhancing lateral confinement and preventing structural deformation.



Infrastructure Application

Engineered for base and subbase stabilization in transportation projects. Ideal for constructing durable roads, railways, temporary working platforms, and paved surfaces, effectively reducing construction costs and extending infrastructure service life.

Pico Lab

(2) How It Works

1

Traffic Load Application

Simulates real-world dynamic loading to replicate the stress cycles and fatigue that pavement materials experience under daily traffic conditions, ensuring lab testing reflects actual field performance.

2

Bidirectional Reinforcement

Applies dual-axis stress to address both vertical and horizontal forces, enhancing the pavement's structural integrity to counteract deformation from multi-directional vehicle movement.

3

Aggregate Interlock & Load Spread

Forces mechanical bonding between aggregate particles, distributing load forces evenly across the pavement matrix to eliminate weak points and prevent localized cracking.

4

Pavement Stabilization

Creates a dense, chemically bonded structure through compaction, forming a rigid load-bearing layer that resists environmental stressors and heavy axle loads.

(3) Key Benefits



Performance

Exceptional load-bearing strength and deformation resistance for smooth, safe surfaces.



Durability

Extended service life with minimal wear, reducing costly repairs and replacements.



Efficiency

Faster curing and construction cycles optimize project timelines and reduce delays.



Reliability

Consistent structural integrity across extreme temperatures and weather conditions.



Sustainability

Eco-friendly materials and reduced carbon footprint for green infrastructure.



Versatility

Adaptable to highways, airports, and urban roads with flexible/rigid pavements.

(4) Application



Roads & Highways

Reinforces flexible pavements to prevent reflective cracking and rutting in high-volume traffic zones.



Railways

Stabilizes subgrades and ballast beds, enhancing track stability and reducing maintenance frequency.



Working Platforms

Provides stable, load-bearing access for heavy construction machinery on soft or unstable ground.



Industrial Yards

Optimizes load distribution in logistics hubs, withstanding heavy vehicles and container stacking.



Parking Areas

Extends pavement lifespan in high-turnover zones, resisting wear from constant vehicle movement.



Airport Pavements

Meets strict load requirements for aircraft, ensuring safety and minimizing fatigue damage.

(5) Technical Specifications

Model	Mass (g/m ²)	Breadth (m)	Ly (kN/m)	Ty (kN/m)	Le (%)	Te (%)	2%L (kN/m)	2%T (kN/m)
BG15-15	1500	4.0	15.0	15.0	12	12	10.0	10.0
BG20-20	2000	4.0	20.0	20.0	13	13	12.0	12.0
BG30-30	3000	4.0	30.0	30.0	14	14	18.0	18.0
BG40-40	4000	4.0	40.0	40.0	15	15	24.0	24.0
BG45-45	4500	4.0	45.0	45.0	16	16	27.0	27.0

* Note: All values are based on standard laboratory tests. Ly=Longitudinal Yield, Ty=Transverse Yield, Le=Elongation.