

Multidirectional Plastic Geogrid (PicoGrid M™)

(1) Product Definition



Engineered Polymer Grid

Manufactured by stretching high-performance polymer sheets into a stable, rigid polygonal grid. This creates a robust skeletal structure far more durable than woven alternatives.



Omnidirectional Load Diffusion

Unlike uniaxial/biaxial grids, it distributes stresses evenly across all axes. This eliminates directional weak points, ensuring uniform reinforcement in every direction.



Aggregate Interlock & Transfer

The grid apertures create a mechanical bond with infill materials, enhancing lateral confinement. This improves load transfer efficiency and prevents soil particle movement.



Versatile Stabilization Solution

Ideal for a broad spectrum of ground improvement projects, including road construction, foundation reinforcement, retaining walls, and subgrade stabilization.

Pico Lab

(2) How It Works

The multidirectional grid structure interlocks with surrounding aggregates to form a mechanically stabilized composite layer. Under applied loads, stresses are efficiently distributed across interconnected ribs and junctions, significantly reducing lateral aggregate movement and boosting load-bearing capacity. This mechanism minimizes differential settlement, enhances structural stability, and drastically extends the service life of pavements and earthworks by preventing premature fatigue and deformation.



Core Mechanism: Creates a stiffened composite layer that transforms granular fill into a load-spreading platform, eliminating the need for over-engineered base layers.

(3) Key Benefits

01. Multidirectional Load

Distributes vertical/horizontal stresses evenly, preventing localized cracking and structural failure under heavy traffic.

03. High Junction Integrity

Robust rib junctions maintain structural continuity, ensuring consistent performance through repeated loading cycles.

05. Long-Term Durability

Resistant to UV degradation, chemicals, and fatigue, ensuring a lifespan exceeding traditional unbound pavements.

02. Superior Aggregate Lock

Locks base materials in place, eliminating lateral spread and improving shear strength for enhanced stability.

04. Improved Ground Performance

Stabilizes weak subgrades and problematic soils, reducing the need for costly excavation or deep replacement.

06. Cost-Effective Build

Reduces material thickness and construction time, delivering significant savings on both capital and maintenance costs.

(4) Applications

Multidirectional Plastic Geogrid is engineered for superior soil interaction, delivering robust reinforcement for infrastructure projects demanding long-term stability and load-bearing capacity across diverse ground conditions.

01 Roads & Highways

Reinforces subbase layers, minimizing rutting and extending pavement service life.

04 Working Platforms

Creates stable access routes for heavy machinery on soft, unstable terrain.

07 Embankments

Prevents slope failure and erosion in embankment and retaining wall projects.

02 Railway Foundations

Stabilizes ballast and subgrade to withstand heavy rail loads and track stresses.

05 Soft Ground Improvement

Enhances bearing capacity of weak soils for safe and cost-effective construction.

08 Temporary Access Roads

Provides quick, cost-effective site access during construction phases.

03 Airport Pavements

Supports heavy aircraft loads with minimal deformation of soft subgrades.

06 Industrial Yards

Withstands heavy static/dynamic loads from containers and industrial vehicles.

09 Logistics Hubs

Reinforces pavement for high traffic flow and heavy vehicle movements.

(5) Technical Specifications

Model	Rib Pitch (L) mm	Rib Pitch (D) mm	Mid-Rib Depth mm
MG50	100 ± 5	141 ± 5	5.0 ± 0.5
MG70	100 ± 5	141 ± 5	6.0 ± 0.5
MG120	100 ± 5	141 ± 5	7.5 ± 0.5
MG160	100 ± 5	141 ± 5	9.0 ± 0.5

* Specifications are nominal and based on standard testing conditions (ISO/GB standards). Tolerances may vary per manufacturing batch.