



# GBX<sup>®</sup> Series of Biaxial Geogrids

BASE COURSE REINFORCEMENT | SUBGRADE IMPROVEMENT

## CARTHAGE MILLS' GBX<sup>®</sup> SERIES OF INTEGRALLY FORMED BIAxIAL GEOGRIDS



### ■ SERIES DESCRIPTION

The biaxial geogrid staple of the geosynthetic industry for over 30 years is now available at Carthage Mills. The **Carthage GBX<sup>®</sup> Series** of integrally formed biaxial geogrids – including commonly referred to *Type 1* and *Type 2* – are produced of the highest grade polypropylene (PP).

The GBX Series is a competitively priced full-line of biaxial geogrids that employs the same combination of technology and materials which have demonstrated decades of proven success in the United States and throughout the world.

Design Engineers can specify with confidence that the **GBX Series** of geogrids will provide the cost effective performance and reliability that the industry has come to trust.

Contractors can be assured of seamless submittals and project approvals when the **GBX Series** of

integrally formed geogrids is their product line of choice.

### ■ FEATURES AND BENEFITS

The **Carthage GBX Series** of biaxial geogrids is the result of decades proven technology. They provide the high flexural rigidity and tensile strengths along the ribs and at the junctions that are required for long-term interlock and confinement in Soil Stabilization and Base Reinforcement applications.

#### ■ MATERIAL AND MANUFACTURING PROCESS

Decades proven and worldwide tested for confidence in performance and reliability you can trust.

#### ■ COST EFFECTIVELY INCREASES LOAD BEARING CAPACITY

Facilitates the construction of haul roads and staging areas over soft soils versus expensive and time consuming chemical stabilization or deep undercutting.

#### ■ BASE REINFORCEMENT / STABILIZATION

*High Tensile Strengths, Junction Efficiency, Flexural Rigidity and Aperture Stability* confine and restrain aggregate from lateral movement, distribute applied loads over the subgrade, minimize rutting, reduce aggre-

and provide a *predictable* and *reliable* level of performance to enhance pavement life.

#### ■ COST SAVINGS – MATERIAL

Available roll widths up to 16 ft. minimize installation labor and material waste.

#### ■ COST SAVINGS – PROJECT/SITE

Proven reductions in fill or aggregate thickness, hauling and equipment hours, undercutting, and rutting. Savings in structural materials alone have been as much as 50%.

### ■ APPLICATIONS

Typical applications include:

- Base Reinforcement for paved highways and secondary roads, runways, and parking lots; railways.
- As gabions for wall construction, erosion control structures and bridge abutments.
- Stabilization/Reinforcement in haul roads, parking areas, equipment and staging yards.
- Working Platforms/mattresses on weak subgrades such as soft soils, peat, tundra.
- Foundation, cement or concrete reinforcement in a wide variety of applications.





# GBX Geogrid

**Product Type:** Integrally Formed Biaxial Geogrid  
**Polymer:** Polypropylene  
**Load Transfer Mechanism:** Positive Mechanical Interlock  
**Primary Applications:** Base Reinforcement, Subgrade Improvement

PROPERTY	UNIT	GBX-11	GBX-12	GBX-13	GBX-15	GBX-41	GBX-42	GBX-1515	GBX-2020	GBX-3030
<b>□ Index Properties</b>										
Aperture Dimensions (M x X)	in	1.0 x 1.3	1.0 x 1.3	1.65 x 2.36	1.0 x 1.2	1.3x1.3	1.3 x 1.3	1.5x1.5	1.42 x 1.50	1.5x1.5
Minimum Rib Thickness	in	0.03 x 0.03	0.05 x 0.05	0.05 x 0.05	0.07 x 0.06	0.03 x 0.03	0.05 x 0.05	0.035x0.025	0.04 x 0.03	0.09x0.06
Tensile Strength @ 2% Strain	lbs/ft	280 x 450	410 x 620	380x 650	580 x 690	270 x 380	380 x 510	340 x 340	450 x 450	720x720
Tensile Strength @ 5% Strain		580 x 920	810 x 1340	720 x 1200	1200 x 1370	550 x 720	720 x 1,000	750 x 750	890 x 890	1440x1440
Ultimate Tensile Strength		850 x 1300	1310 x 1970	1100 x 1920	1850 x 2050	880 x 920	1400 x 1610	1030 x 1030	1370 x 1370	2055x2055
<b>□ Structural Integrity</b>										
Junction Efficiency	%	93	93	93	93	93	93	93	93	93
Flexural Stiffness	mg-cm	250,000	750,000	450,000	2,000,000	250,000	750,000	325,000	700,000	2,000,000
Aperture Stability	m-N/deg	0.32	0.65	0.58	0.75	0.28	0.48	0.38	0.45	0.75
<b>□ Durability</b>										
Resistance to Installation Damage	%	95/93/90	95/93/90	91/83/72	95/93/90	90/83/70	90/83/75	95/93/90	95/93/90	95/93/90
Resistance to Long Term Degradation		100	100	100	100	100	100	100	100	100
Resistance to UV Degradation		100	100	100	100	100	100	100	100	100
<b>□ Roll Sizes Available</b>										
	ft yd <sup>2</sup> lbs	9.8x246 268 yds <sup>2</sup>	9.8x164 179yds <sup>2</sup>	13.1x164 239yds <sup>2</sup>	13.1x164 239yds <sup>2</sup>	9.8x246 268yds <sup>2</sup>	9.8x164 179yds <sup>2</sup>	13.1x246 358yds <sup>2</sup>	13.1x246 358yds <sup>2</sup>	13.1x164 239yds <sup>2</sup>
		13.10x246 358 yds <sup>2</sup>	13.10x164 239 yds <sup>2</sup>			13.1x246 358yds <sup>2</sup>				
		16.0x328 583 yds <sup>2</sup>	16.0x328 583yds <sup>2</sup>	16x328 583yds <sup>2</sup>						

- Unless otherwise stated, all values stated here are Minimum Average Roll Values (MARV).
- The properties reported above are effective 12-01-18 and are subject to change without notice.

Carthage Mills assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. Carthage Mills disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.