

NS35 Grid is a geogrid for soil reinforcement, made from high molecular weight, high tenacity polyester yarns that are woven into a stable network placed under tension. The high strength polyester yarn are coated with polymeric material. NS35 Grid geogrids are engineered to be mechanically and chemically durable and resistant to biological degradation. NS35 Grid geogrids are used for soil reinforcement applications.

Mechanical Properties	Standard	Unit	NS35
Ultimate Tensile Strength <sup>(1)</sup>	ASTM D6637	lb/ft (kN/m)	3,600 (52.6)
Creep Reduced Strength <sup>(2)</sup>	ASTM D5262	lb/ft (kN/m)	2,384 (34.8)
Long Term Design Strength (LTDS)	GRI GG4 & NCMA	lb/ft (kN/m)	2,064 (30.1)
Physical Properties			
Roll width		ft (m)	12 (3.7)
Roll length		ft (m)	150 (45.72)
Roll Area		sy (m <sup>2</sup> )	200 (167.2)

© 2018 N&S Rentals, Inc.. All rights reserved. N&S Rentals, Inc. will enforce Copyright.

1. Minimum Average Roll Values (MARV) is calculated as the average minus two (2) standard deviations. Statistically, it yields approximately 97.5 % degree of confidence that any samples taken from quality assurance testing will meet or exceed the value reported.
2. Creep reduced strength is calculated for a 75 year design life at 20°C.
3. Long term design strength (LTDS) is calculated for 75 years design life, soil pH 4.0 to 9.0 at 20°C, and for silty sand

## Product Specification - Biaxial Geogrid BX1100

*N & S Rentals, Inc. reserves the right to change its product specifications at any time. It is the responsibility of the specifier and purchaser to ensure that product specifications used for design and procurement purposes are current and consistent with the products used in each instance.*

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

### Product Properties

Index Properties	Units	MD Values <sup>1</sup>	XMD Values <sup>1</sup>
▪ Aperture Dimensions <sup>2</sup>	mm (in)	25 (1.0)	33 (1.3)
▪ Minimum Rib Thickness <sup>2</sup>	mm (in)	0.76 (0.03)	0.76 (0.03)
▪ Tensile Strength @ 2% Strain <sup>3</sup>	kN/m (lb/ft)	4.1 (280)	6.6 (450)
▪ Tensile Strength @ 5% Strain <sup>3</sup>	kN/m (lb/ft)	8.5 (580)	13.4 (920)
▪ Ultimate Tensile Strength <sup>3</sup>	kN/m (lb/ft)	12.4 (850)	19.0 (1,300)
<b>Structural Integrity</b>			
▪ Junction Efficiency <sup>4</sup>	%	93	
▪ Flexural Stiffness <sup>5</sup>	mg-cm	250,000	
▪ Aperture Stability <sup>6</sup>	m-N/deg	0.32	
<b>Durability</b>			
▪ Resistance to Installation Damage <sup>7</sup>	%SC / %SW / %GP	95 / 93 / 90	
▪ Resistance to Long Term Degradation <sup>8</sup>	%	100	
▪ Resistance to UV Degradation <sup>9</sup>	%	100	

### Dimensions and Delivery

The biaxial geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.0 meters (9.8 feet) or 4.0 meters (13.1 feet) in width and 75.0 meters (246 feet) in length. A typical truckload quantity is 185 to 250 rolls.

### Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
2. Nominal dimensions.
3. Determined in accordance with ASTM D6637-10 Method A.
4. Load transfer capability determined in accordance with ASTM D7737-11.
5. Resistance to bending force determined in accordance with ASTM D7748-12, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs, and of length sufficiently long to enable measurement of the overhang dimension.
6. Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) moment to the central junction of a 9 inch x 9 inch specimen restrained at its perimeter in accordance with GRI GG9.
7. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress in clayey sand (SC), well graded sand (SW), and crushed stone classified as poorly graded gravel (GP). The geogrid shall be sampled in accordance with ASTM D5818 and load capacity shall be determined in accordance with ASTM D6637.
8. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
9. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.

## Product Specification - Biaxial Geogrid BX1200

*N & S Rentals, Inc. reserves the right to change its product specifications at any time. It is the responsibility of the specifier and purchaser to ensure that product specifications used for design and procurement purposes are current and consistent with the products used in each instance.*

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

### Product Properties

Index Properties	Units	MD Values <sup>1</sup>	XMD Values <sup>1</sup>
▪ Aperture Dimensions <sup>2</sup>	mm (in)	25 (1.0)	33 (1.3)
▪ Minimum Rib Thickness <sup>2</sup>	mm (in)	1.27 (0.05)	1.27 (0.05)
▪ Tensile Strength @ 2% Strain <sup>3</sup>	kN/m (lb/ft)	6.0 (410)	9.0 (620)
▪ Tensile Strength @ 5% Strain <sup>3</sup>	kN/m (lb/ft)	11.8 (810)	19.6 (1,340)
▪ Ultimate Tensile Strength <sup>3</sup>	kN/m (lb/ft)	19.2 (1,310)	28.8 (1,970)
<b>Structural Integrity</b>			
▪ Junction Efficiency <sup>4</sup>	%	93	
▪ Flexural Stiffness <sup>5</sup>	mg-cm	750,000	
▪ Aperture Stability <sup>6</sup>	m-N/deg	0.65	
<b>Durability</b>			
▪ Resistance to Installation Damage <sup>7</sup>	%SC / %SW / %GP	95 / 93 / 90	
▪ Resistance to Long Term Degradation <sup>8</sup>	%	100	
▪ Resistance to UV Degradation <sup>9</sup>	%	100	

### Dimensions and Delivery

The biaxial geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.0 meters (9.8 feet) or 4.0 meters (13.1 feet) in width and 50.0 meters (164 feet) in length. A typical truckload quantity is 160 to 210 rolls.

### Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
2. Nominal dimensions.
3. Determined in accordance with ASTM D6637-10 Method A.
4. Load transfer capability determined in accordance with ASTM D7737-11.
5. Resistance to bending force determined in accordance with ASTM D7748-12, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs, and of length sufficiently long to enable measurement of the overhang dimension.
6. Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) moment to the central junction of a 9 inch x 9 inch specimen restrained at its perimeter in accordance with GRI GG9.
7. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress in clayey sand (SC), well graded sand (SW), and crushed stone classified as poorly graded gravel (GP). The geogrid shall be sampled in accordance with ASTM D5818 and load capacity shall be determined in accordance with ASTM D6637.
8. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
9. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.