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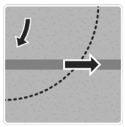

Miragrid® 2XT

Miragrid® 2XT biaxial geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns are woven in tension and finished with a PVC coating. Miragrid® 2XT biaxial geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 2XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 2XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

TenCate Geosynthetics Americas is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE	
			MD	CD
Tensile Strength @ Ultimate	ASTM D6637(Method B)	lbs/ft (kN/m)	2000 (29.2)	2000 (29.2)
Mass/Unit Area[1]	(ASTM D5261)	oz/yd^2 (g/m^2)	7.1 (241)	
			MINIMUM ROLL VALUE	
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	1389 (20.3)	1389 (20.3)
Long Term Design Strength[3]		lbs/ft (kN/m)	1202 (17.5)	1202 (17.5)

PHYSICAL PROPERTIES	UNIT	ROLL CHARATERISTIC
Roll Dimensions[4] (width x length)	ft (m)	4 x 50 (1.2 x 15) 6 x 150 (1.8 x 46) 12 x 150 (3.6 x 46)
Roll Area	yd^2 (m^2)	22 (18) 100 (84) 200 (167)
Estimated Roll Weight	lbs (kg)	25 (11) 50 (23) 109 (49)
Label Roll Color		WHITE

[1]Typical Value
[2]75-year design life based on NTPEP Report REGEO-2016-01-062.
[3]Value based on Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1
(Installation damage reduction factor for other soils available upon request)
[4]Special order roll lengths are available upon request.

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TENCATE GEOSYNTHETICS

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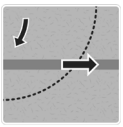

Miragrid® 3XT

Miragrid® 3XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 3XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 3XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 3XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

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MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE
			MD
Tensile Strength @ Ultimate	ASTM D6637(Method B)	lbs/ft (kN/m)	3500 (51.1)
Tensile Strength @ 5% strain	ASTM D6637(Method B)	lbs/ft (kN/m)	1056 (15.4)
Mass/Unit Area[1]	ASTM D5261	oz/yd^2 (g/m^2)	7.4 (251)
			MINIMUM ROLL VALUE
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	2431 (35.5)
Long Term Design Strength[3]		lbs/ft (kN/m)	2104 (30.7)

PHYSICAL PROPERTIES	UNIT	ROLL CHARACTERISTIC
Roll Dimensions[4] (width x length)	ft (m)	6 x 300 (1.8 x 91) 12 x 150 (3.6 x 46) 12 X 1000 (3.6 x 305)
Roll Area	yd^2 (m^2)	200 (167) 200 (167) 1333 (1114)
Estimated Roll Weight	lbs (kg)	115 (52) 115 (52) 670 (304)
Label Roll Color		WHITE

[1] Typical Value
[2] 75-year design life based on NTPEP Report REGEO-2016-01-063.
[3] Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1 (Installation damage reduction factor for other soils available upon request).
[4] Special order roll lengths are available upon request.

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NTPEP GMA Geosynthetic Materials Association QUALITY ASSURANCE ACCREDITED LABORATORY GAI-LAP-25-07

TENCATE GEOSYNTHETICS

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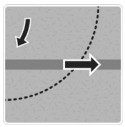

Miragrid® 5XT

Miragrid® 5XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 5XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 5XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 5XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

TenCate Geosynthetics Americas is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE
			MD
Tensile Strength @ Ultimate	ASTM D6637(Method B)	lbs/ft (kN/m)	4700 (68.6)
Tensile Strength @ 5% strain	ASTM D6637(Method B)	lbs/ft (kN/m)	1740 (25.4)
Mass/Unit Area[1]	ASTM D5261	oz/yd^2 (g/m^2)	9.3 (315)
			MINIMUM ROLL VALUE
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	3264 (47.6)
Long Term Design Strength[3]		lbs/ft (kN/m)	2826 (41.2)

PHYSICAL PROPERTIES	UNIT	ROLL CHARACTERISTIC
Roll Dimensions[4] (width x length)	ft (m)	6 x 300 (1.8 x 91) 12 x 150 (3.6 x 46) 12 X 1000 (3.6 x 305)
Roll Area	yd^2 (m^2)	200 (167) 200 (167) 1333 (1114)
Estimated Roll Weight	lbs (kg)	135 (61) 135 (61) 831 (376)
Label Roll Color		WHITE

[1] Typical Value
[2] 75-year design life based on NTPEP Report REGEO-2016-01-064.
[3] Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1 (Installation damage reduction factor for other soils available upon request).
[4] Special order roll lengths are available upon request

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TENCATE GEOSYNTHETICS

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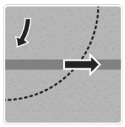

Miragrid® 7XT

Miragrid® 7XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 7XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 7XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 7XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

TenCate Geosynthetics Americas is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE
			MD
Tensile Strength @ Ultimate	ASTM D6637(Method B)	lbs/ft (kN/m)	5900 (86.1)
Tensile Strength @ 5% strain	ASTM D6637(Method B)	lbs/ft (kN/m)	2160 (31.5)
Mass/Unit Area[1]	(ASTM D5261)	oz/yd^2 (g/m^2)	9.4 (346)
			MINIMUM ROLL VALUE
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	4097 (59.7)
Long Term Design Strength[3]		lbs/ft (kN/m)	3547 (51.7)

PHYSICAL PROPERTIES	UNIT	ROLL CHARACTERISTIC
Roll Dimensions[4] (width x length)	ft (m)	6 x 300 (1.8 x 91) 12 x 200 (3.6 x 61) 12 X 1000 (3.6 x 305)
Roll Area	yd^2 (m^2)	200 (168) 267 (220) 1333 (1114)
Estimated Roll Weight	lbs (kg)	130 (58) 179 (81) 846 (383)
Label Roll Color		WHITE

[1]Typical Value
[2] 75-year design life based on NTPEP Report REGEO-2016-01-065. .
[3] Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1
(Installation damage reduction factor for other soils available upon request.
[4] Special order roll lengths are available upon request

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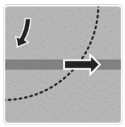

Miragrid® 8XT

Miragrid® 8XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 8XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 8XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 8XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

TenCate Geosynthetics Americas is accredited by Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE
			MD
Tensile Strength @ Ultimate	ASTM D6637(Method B)	lbs/ft (kN/m)	7400 (108.0)
Tensile Strength @ 5% strain	ASTM D6637(Method B)	lbs/ft (kN/m)	2520 (36.8)
Mass/Unit Area[1]	(ASTM D5261)	oz/yd^2 (g/m^2)	10.8 (366)

			MINIMUM ROLL VALUE
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	5139 (75.1)
Long Term Design Strength[3]		lbs/ft (kN/m)	4449 (64.9)

PHYSICAL PROPERTIES	UNIT	ROLL CHARACTERISTIC
Roll Dimensions[4] (width x length)	ft (m)	6 x 300 (1.8 x 91) 12 x 200 (3.6 x 61) 12 X 1000 (3.6 x 305)
Roll Area	yd^2 (m^2)	200 (168) 267 (220) 1333 (1114)
Estimated Roll Weight	lbs (kg)	140 (64) 205 (93) 975 (442)
Label Roll Color		WHITE

[1] Typical Value
[2] 75-year design life based on NTPEP Report REGEO-2016-01-066.
[3] Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1 (Installation damage reduction factor for other soils available upon request).
[4] Special order roll lengths are available upon request

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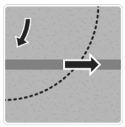

Miragrid® 10XT

Miragrid® 10XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 10XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 10XT geogrid is used as soil reinforcement in MSE structures such as segmental retaining walls, precast modular block walls, wire faced walls, geosynthetic wrapped faced walls and steepened slopes. Miragrid® 10XT is also used in MSE stabilized platforms for voids bridging, embankments on soft soils, landfill veneer stability, reducing differential settlement and for foundation seismic stability.

TenCate Geosynthetics Americas is accredited Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE
			MD
Tensile Strength @ Ultimate	ASTM D6637 (Method B)	lbs/ft (kN/m)	9500 (138.6)
Tensile Strength @ 5% strain	ASTM D6637 (Method B)	lbs/ft (kN/m)	3120 (45.5)
Mass/Unit Area[1]	(ASTM D5261)	oz/yd^2 (g/m^2)	13.4 (454)
			MINIMUM ROLL VALUE
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	6597 (96.1)
Long Term Design Strength[3]		lbs/ft (kN/m)	5712 (83.3)

PHYSICAL PROPERTIES	UNIT	ROLL CHARACTERISTIC
Roll Dimensions[4] (width x length)	ft (m)	12 x 200 (3.6 x 61) 12 X 1000 (3.6 x 305)
Roll Area	yd^2 (m^2)	267 (220) 1333 (1114)
Estimated Roll Weight	lbs (kg)	223 (102) 1075 (490)
Label Roll Color		WHITE

[1] Minimum Average Roll Values (MARV) shown above are based on QC Testing per a defined lot not to exceed 12 months. Testing Frequency follows ASTM D4354, Table 1.
[2] 75-year design life based on NTPEP Report REGEO-2016-01-067.
[3] Long Term Design Strength for sand, silt, clay. RF_{CR} = 1.44; RF_{ID} = 1.05; RF_D = 1.1 (Installation damage reduction factor for other soils available upon request).
[4] Special order roll lengths are available upon request

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