TENCATE Mirafi®

SOIL REINFORCEMENT

Miragrid® Geogrids
for Soil Reinforcement

Miragrid® 5XT

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

The Difference Miragrid® Geogrids Make:

- High long-term design strengths (LTDS). Miragrid® geogrids have more than 100,000 hours of tension creep testing performed at an independent test laboratory. Credible, dependable long term strength assured.
- Cost effective. Creep resistant polyester fibers provide higher allowable tensile strength, minimizing the required number of geogrid layers. Wide rolls significantly reducing placement time, lowering cost.
- Light weight, easy to handle. No sharp edges.
- Flexible, tough. Minimizes movement of soil structure.
- Custom fabrication. Rolls fabricated to meet your specific project requirements.
- Miragrid® geogrids provide the widest strength range, and are the highest strength geogrid material in the market today.

APPLICATIONS

Miragrid® geogrids can be used in most MSE applications for soil reinforcement including internally reinforced soil walls, segmental retaining wall reinforcement, steep reinforced slopes, and reinforcement in a variety of landfill applications including potential voids bridging and veneer stability. When a project specifies for long-term design strength for structure stability use Miragrid® geogrids.

INSTALLATION GUIDELINES

Before placing Miragrid® geogrids, the surface should be cleared of all debris and the foundation base proofrolled. The grids should be rolled out, cut to length, thus eliminating field connections and laid at the proper elevation, location and orientation. Since geogrids vary in strength with roll direction, Miragrid® geogrids should be laid in the direction of main reinforcement.

After rolling out, the geogrid should be tensioned by hand until it is taut, free of wrinkles, and lying flat. Adjacent geogrid rolls may be butted together side-by-side without overlap. Splices in the main reinforcement direction should be avoided.

Certain fill placement procedures may require the reinforcement to be held in place by stakes, sandbags, or fills, as directed by an engineer. A razor blade, sharp knife or scissors may be used to cut the geogrid. Fill placement should follow the standard practice, or as defined in the project specifications or directed by the Engineer. Care should be taken to prevent wrinkles and/or slippage of reinforcement during fill placement and spreading.

These guidelines serve as a general basis for installation. Detailed instructions are available from your TenCate representative.

TENCATE Mirafi®

Miragrid® Geogrids

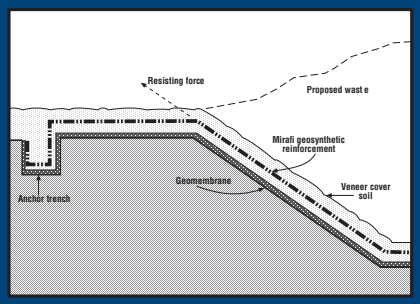
for Soil Reinforcement

Property	Test Method	Units	2XT[4]	3XT	5XT	7XT	8XT	10XT	20XT	22XT	24XT
Polymer (coating)	–	–	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)
Tensile Strength @ Ultimate (MARV)[1]	ASTM D6637 (Method B)	lbs/ft (kN/m)	2000 (29.0)	3500 (51.1)	4700 (68.6)	5900 (86.1)	7400 (108.0)	9500 (138.6)	13705 (200.0)	20559 (300.0)	27415 (400.0)
Creep Reduced Strength[2]	ASTM D5262/ D6992	lbs/ft (kN/m)	1379 (20.0)	2414 (35.2)	3241 (47.3)	4069 (59.4)	5103 (74.5)	6552 (95.6)	9452 (137.9)	14179 (206.9)	18907 (275.9)
Long Term Design Strength[3]		lbs/ft (kN/m)	1142 (17.0)	1999 (29.2)	2684 (39.2)	3370 (49.2)	3927 (57.3)	5042 (73.6)	7540 (110.0)	11311 (165.0)	15083 (220.1)

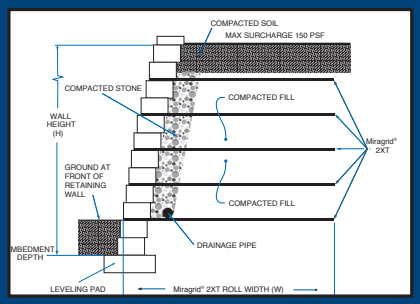
Packaging	Units	2XT[5]	3XT[5]	5XT[5]	7XT[5]	8XT[5]	10XT[5]	20XT[5]	22XT[5]	24XT[5]
Roll Width	ft (m)	4 6 12 (1.2) (1.8) (3.6)	6 12 (1.8) (3.6)	6 12 (1.8) (3.6)	6 12 (1.8) (3.6)	6 12 (1.8) (3.6)	12 (3.6)	12 (3.6)	12 (3.6)	12 (3.6)
Roll Length	ft (m)	50 150 1000 (15) (46) (305)	150 300 1000 (46) (91) (305)	150 300 1000 (46) (91) (305)	200 300 1000 (61) (91) (305)	200 300 1000 (61) (91) (305)	200 1000 (61) (305)	200 1000 (61) (305)	200 (61)	200 1000 (61) (305)
Estimate Roll Weight	lbs (kg)	25 50 109 (11) (23) (49)	115 115 670 (52) (52) (304)	135 135 831 (61) (61) (376)	130 179 846 (58) (81) (383)	140 205 975 (64 (93) (442)	255 1235 (116) (559)	360 1725 (163) (781)	470 (213)	595 2840 (270) (1287)
Area	yd² (m²)	22 100 109 (18) (84) (167)	200 200 1333 (167) (167) (1114)	200 200 1333 (167) (167) (1114)	200 267 1333 (168) (220) (1114)	200 267 1333 (168) (220) (1114)	267 1333 (220) (1114)	267 1333 (220) (1114)	267 (220)	267 1333 (220) (1114)

[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-2011-01-001 and REGEO-2015-01-002.
[3]Long Term Design Strength for Type 3 Backfill (Sifty Sand), 6-inch lift / 25,000-lb roller.
[4]Note: Values shown for Miragrid 2XT® are both machine and cross-machine direction. Values for other Mirafi® products are machine direction only.
[5]Available in various roll widths and roll lengths.

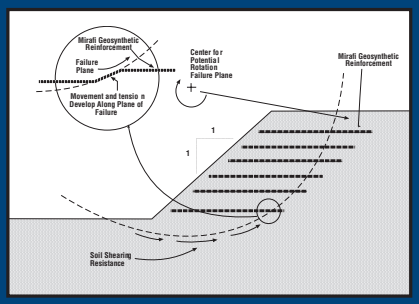
Miragrid® Geogrids Typical Applications



Veneer Reinforcement



Retaining Wall



Steepened Slope

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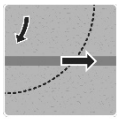

Miragrid® 2XT

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	Value	
			MD	CD
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	2000 (29.2)	2000 (29.2)
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	1389 (20.3)	
Long Term Design Strength[3]		lbs/ft (kN/m)	1202 (17.5)	

[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-2016-01-062.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	7.1 (241)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 2XT is continuously printed in white on the edge of the roll.

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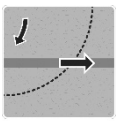

Miragrid® 3XT

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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	3500 (51.1)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	1056 (15.4)
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)

[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-2016-01-063.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	7.4 (251)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 3XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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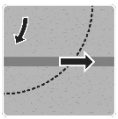

Miragrid® 5XT

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.

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Mechanical Properties	Test Method	Unit	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	4700 (68.6)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	1740 (25.4)
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	3264 (47.6)
Long Term Design Strength[3]		lbs/ft (kN/m)	2825 (41.2)

[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-2016-01-064.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	9.3 (315)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 5XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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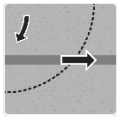
Miragrid® 7XT



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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	5900 (86.1)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	2160 (31.5)
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)

[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-2016-01-065. .
[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.

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	9.4 (346)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 7XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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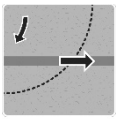

Miragrid® 8XT

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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	7400 (108.0)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	2520 (36.8)
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)

[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-2016-01-066.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	10.8 (366)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 8XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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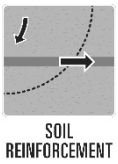
Miragrid® 10XT



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.

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Mechanical Properties	Test Method	Unit	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	9500 (138.6)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	3120 (45.5)
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)

[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	13.4 (454)
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)

[4] Special order roll lengths are available upon request.

Miragrid® 10XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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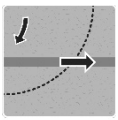
Miragrid® 20XT



Miragrid® 20XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 20XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 20XT 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® 20XT 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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	13705 (200.0)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	5340 (77.9)
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	9517 (138.8)
Long Term Design Strength[3]		lbs/ft (kN/m)	8240 (120.2)

[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-2016-01-068.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd² (g/m²)	19.6 (664)
Roll Dimensions[4] (width x length)	ft (m)	12 x 200 (3.6 x 61) 12 x 1000 (3.6 x 305)
Roll Area	yd² (m²)	267 (220) 1333 (1114)
Estimated Roll Weight	lbs (kg)	360 (163) 1725 (781)

[4] Special order roll lengths are available upon request.

Miragrid® 20XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

GAI-LAP-25-97

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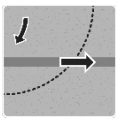
TENCATE GEOSYNTHETICS
Americas



Miragrid® 22XT

Miragrid® 22XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 22XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid 22XT 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 22XT 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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	20559 (300.0)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	6700 (97.8)
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	14277 (208.3)
Long Term Design Strength[3]		lbs/ft (kN/m)	12361 (180.4)

[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-2016-01-069. .
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	28.2 (956)
Roll Dimensions[4] (width x length)	ft (m)	12 x 200 (3.6 x 61)
Roll Area	yd^2 (m^2)	267 (220)
Estimated Roll Weight	lbs (kg)	470 (213)

[4] Special order roll lengths are available upon request.

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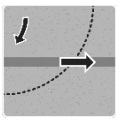

Miragrid® 24XT

Miragrid® 24XT geogrid is composed of high molecular weight, high tenacity polyester multifilament yarns woven in tension and finished with a PVC coating. Miragrid® 24XT geogrid is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Miragrid® 24XT 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® 24XT 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	Machine Direction Value
Tensile Strength @ Ultimate (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	27415 (400.0)
Tensile Strength @ 5% strain (MARV[1])	ASTM D6637 (Method B)	lbs/ft (kN/m)	7000 (102.1)
Creep Rupture Strength[2]	ASTM D5262/D6992	lbs/ft (kN/m)	19038 (277.8)
Long Term Design Strength[3]		lbs/ft (kN/m)	16483 (240.5)

[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-2016-01-070.
[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).

Physical Properties	Unit	Roll Characteristic
Mass/Unit Area (ASTM D5261)	oz/yd^2 (g/m^2)	32.6 (1119)
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)	595 (270) 2840 (1287)

[4] Special order roll lengths are available upon request.

Miragrid® 24XT and Tensile Strength direction are continuously printed in white on the edge of the roll.

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