



Geogrid Product Positioning (for steep slope applications)

PRODUCT ¹	LTDS ² (in sand, silt, clay)	Creep Reduced Strength ³	Ultimate Tensile Strength ³
	GRI-GG4 kN/m (lb/ft)	ASTM D 5262 kN/m (lb/ft)	ASTM D 4595 kN/m (lb/ft)
Miragrid 24XT	186.4 (12776)	215.3 (14756)	370.3 (25380)
Miragrid 22XT	130.4 (8940)	150.7 (10326)	259.1 (17760)
Enkagrid PRO 180	108 (7407)	119.2 (8167)	180.0 (12336)
Miragrid 20XT	91.2 (6252)	105.4 (7221)	181.2 (12420)
Enkagrid PRO 120	72.1 (4940)	79.5 (5447)	120.0 (8224)
Tensar UX 1700HS	71.6 (4909)	78.8 (5400)	175 (11990)
Miragrid 18XT	70.9 (4862)	81.9 (5616)	136.6 (9360)
Miragrid 10XT	62.9 (4312)	72.7 (4980)	121.1 (8300)
Tensar UX 1600HS	57.2 (3918)	62.9 (4310)	144 (9870)
Enkagrid PRO 90	54.1 (3701)	59.6 (4084)	90.0 (6167)
Miragrid 8XT	53.1 (3636)	61.3 (4200)	102.1 (7000)
Miragrid 7XT	43.2 (2961)	49.9 (3420)	83.2 (5700)
Tensar UX 1500HS	43.1 (2954)	47.5 (3250)	114 (7810)
Enkagrid PRO 60	36 (2467)	39.7 (2720)	60.0 (4111)
Miragrid 5XT	32.6 (2234)	37.6 (2580)	62.7 (4300)
Tensar UX 1400HS	27.8 (1909)	30.7 (2100)	70 (4800)
Enkagrid PRO 40	24 (1645)	26.5 (1815)	40.0 (2741)
Miragrid 3XT	22.7 (1558)	26.3 (1800)	43.8 (3000)
Tensar UX 1100HS	22.6 (1554)	24.9 (1710)	54 (3700)
Tensar UX1000HS	16.8 (1154)	18.6 (1270)	46 (3150)
Miragrid 2XT	13.8 (949)	17.5 (1200)	29.2 (2000)
Tensar UX800HS	11.9 (818)	13.2 (900)	50 (3460)

¹ Chart for comparison purposes only. Consult your local Mirafi Representative for current design assistance.

² Long Term Design Strength calculated per GRI-GG4 guidelines using published data or a minimum F.S. for Durability of 1.1.

³ Per manufacturer's literature or GFR's "Specifier's Guide", latest data available. (NP=Not Published)





Geogrid Product Positioning (for retaining wall applications)

PRODUCT ¹	LTDS ² (in sand, silt, clay)	Creep Reduced Strength ³	Ultimate Tensile Strength ³
	GRI-GG4 kN/m (lb/ft)	ASTM D 5262 kN/m (lb/ft)	ASTM D 6637 kN/m (lb/ft)
Miragrid 24XT	186.4 (12776)	215.3 (14756)	370.3 (25380)
Miragrid 22XT	130.4 (8940)	150.7 (10326)	259.1 (17760)
Raugrid 20/3-20	104.7 (7175)	141.6 (9700)	201.3 (13797)
Fortrac 200/30-30	103.1 (7065)	119.2 (8166)	197.3 (13500)
Miragrid 20XT	91.2 (6252)	105.4 (7221)	181.2 (12420)
Raugrid 15/3-20	79.5 (5445)	100.5 (6884)	152.9 (10474)
Fortrac 150/30-30	77.1 (5285)	89.2 (6110)	147.6 (10100)
Stratagrid 700	75.0 (5133)	90.6 (6211)	145.9 (10000)
Sympaforce SF-110	73.9 (5048)	85.4 (5831)	149.5 (10205)
Miragrid 18XT	70.9 (4862)	81.9 (5616)	136.6 (9360)
Raugrid 13/3-20	67.3 (4615)	85.1 (5830)	129.3 (8857)
Miragrid 10XT	62.9 (4312)	72.7 (4980)	121.1 (8300)
Fortrac 110/30-20	56.5 (3872)	65.4 (4475)	108.1 (7400)
Stratagrid 600	55.4 (3800)	67.1 (4596)	108.0 (7400)
Miragrid 8XT	53.1 (3636)	61.3 (4200)	102.1 (7000)
Raugrid 10/3-20	51.0 (3492)	63.3 (4336)	98.0 (6715)
Stratagrid 550	46.7 (3200)	56.6 (3876)	91.1 (6240)
Miragrid 7XT	43.2 (2961)	49.9 (3420)	83.2 (5700)
Sympaforce SF-80	42.2 (2883)	48.7 (3330)	85.0 (5829)
Fortrac 80/30-20	41.1 (2815)	47.4 (3250)	78.5 (5380)
Raugrid 8/3-20	40.2 (2754)	50.7 (3473)	77.2 (5288)
Stratagrid 500	34.4 (2360)	41.7 (2857)	67.1 (4600)
Raugrid 6/3-15	33.0 (2260)	41.7 (2856)	63.5 (4350)
Miragrid 5XT	32.6 (2234)	37.6 (2580)	62.7 (4300)
Sympaforce SF-55	31.1 (2125)	40.0 (2455)	60.4 (4125)
Fortrac 55/30-20	28.3 (1936)	32.7 (2240)	54.1 (3700)
Miragrid 3XT	22.7 (1558)	26.3 (1800)	43.8 (3000)
Stratagrid 300	22.5 (1540)	27.2 (1863)	43.8 (3000)
Raugrid 4/2-15	21.6 (1480)	27.3 (1870)	41.5 (2843)
Stratagrid 200	20.4 (1395)	24.6 (1689)	39.7 (2720)
Fortrac 35/20-20	19.3 (1322)	22.3 (1527)	35.0 (2400)
Sympaforce SF-35	18.1 (1242)	21.7 (1476)	36.7 (2510)
Raugrid 3/3-20	17.0 (1165)	21.4 (1466)	32.6 (2213)
Miragrid 2XT	13.8 (949)	17.5 (1200)	29.2 (2000)
Sympaforce SF-20	13.1 (899)	15.8 (1088)	27.1 (1850)
Stratagrid 150	11.7 (800)	14.1 (969)	22.8 (1560)
Strata Mircogrid	11.7 (800)	14.5 (995)	23.4 (1600)
Fortrac 20/13-20	11.1 (762)	13.5 (925)	22.0 (1500)
Raugrid 2/2-20	9.9 (680)	12.5 (856)	19.1 (1308)

¹ Chart for comparison purposes only. Consult your local Mirafi Representative for current design assistance.

² Long Term Design Strength calculated per GRI-GG4 guidelines using published data or a minimum F.S. for Durability of 1.1.

³ Per manufacturer's literature or GFR's "Specifier's Guide", latest data available. (NP=Not Published)





Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 2XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	29.2 (2000)	29.2 (2000)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	17.5 (1200)	17.5 (1200)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	13.8 (949)	13.8 (949)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	255 (7.5)
Roll Dimensions (width x length)	--	m (ft)	1.8 (6) x 45.7 (150)
Roll Area	--	m ² (yd ²)	82.3 (100)
Estimated Roll Weight	---	kg (lbs)	30 (67)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 3XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	43.8 (3000)
Tensile Strength (at 5% strain)	ASTM D 6637	kN/m (lbs/ft)	15.4 (1056)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	26.3 (1800)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	22.7 (1558)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	277 (8.2)
Roll Dimensions (width x length)	--	m (ft)	3.6 (12) x 45.7 (150)
Roll Area	--	m ² (yd ²)	164.5 (200)
Estimated Roll Weight	---	kg (lbs)	55 (123)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 5XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	62.7 (4300)
Tensile Strength (at 5% strain)	ASTM D 6637	kN/m (lbs/ft)	25.4 (1740)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	37.6 (2580)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	32.6 (2234)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	305 (9.0)
Roll Dimensions (width x length)	--	m (ft)	3.6 (12) x 45.7 (150)
Roll Area	--	m ² (yd ²)	164.5 (200)
Estimated Roll Weight	---	kg (lbs)	60 (133)

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TECHNICAL DATA SHEET

Miragrid[®] 7XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	83.2 (5700)
Tensile Strength (at 5% strain)	ASTM D 6637	kN/m (lbs/ft)	31.5 (2160)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	49.9 (3420)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	43.2 (2961)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	346 (10.2)
Roll Dimensions (width x length)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	86 (190)

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TECHNICAL DATA SHEET

Miragrid[®] 8XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	102.1 (7000)
Tensile Strength (at 5% strain)	ASTM D 6637	kN/m (lbs/ft)	36.8 (2520)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	61.3 (4200)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	53.1 (3636)

*NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	387 (11.4)
Roll Dimensions (length x width)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	95 (210)

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TECHNICAL DATA SHEET

Miragrid[®] 10XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 6637	kN/m (lbs/ft)	121.1 (8300)
Tensile Strength (at 5% strain)	ASTM D 6637	kN/m (lbs/ft)	45.5 (3120)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	72.7 (4980)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	62.9 (4312)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	22 (0.875)
Grid Aperture Size (cross machine direction)	--	mm (in)	25 (1.0)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	485 (14.3)
Roll Dimensions (width x length)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	116 (258)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 18XT

Miragrid[®] 18XT is composed of high molecular weight, high tenacity polyester multifilament yarns which are woven in tension and finished with a PVC coating. Miragrid[®] 18XT is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/ft)	136.6 (9360)
Tensile Strength (at 5% strain)	ASTM D 4595	kN/m (lbs/ft)	64.8 (4440)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	81.9 (5616)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	67.7 (4641)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	81 (3.2)
Grid Aperture Size (cross machine direction)	--	mm (in)	12 (0.5)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	617 (18.2)
Roll Dimensions (length x width)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	149 (328)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 20XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/ft)	181.2 (12420)
Tensile Strength (at 5% strain)	ASTM D 4595	kN/m (lbs/ft)	77.9 (5340)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	105.4 (7221)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	87.1 (5968)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	81 (3.2)
Grid Aperture Size (cross machine direction)	--	mm (in)	7.6 (0.3)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	750 (22.1)
Roll Dimensions (length x width)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	179 (393)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 22XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/ft)	259.1 (17760)
Tensile Strength (at 5% strain)	ASTM D 4595	kN/m (lbs/ft)	104.2 (7140)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	150.7 (10326)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	124.5 (8534)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	81 (3.2)
Grid Aperture Size (cross machine direction)	--	mm (in)	7.6 (0.3)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	1034 (30.5)
Roll Dimensions (length x width)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	242 (533)

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Ten Cate Nicolon

TECHNICAL DATA SHEET

Miragrid[®] 24XT

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

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
			Machine Direction
Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/ft)	370.3 (25380)
Tensile Strength (at 5% strain)	ASTM D 4595	kN/m (lbs/ft)	146.2 (10020)
Creep Reduced Strength	ASTM D 5262	kN/m (lbs/ft)	215.3 (14756)
Long Term Allowable Design Load*	GRI GG-4	kN/m (lbs/ft)	177.9 (12195)

* NOTE: Long Term Allowable Design values are for sand, silt and clay.

Physical Properties	Test Method	Unit	Typical Value
Grid Aperture Size (machine direction)	--	mm (in)	81 (3.2)
Grid Aperture Size (cross machine direction)	--	mm (in)	5.1 (0.2)
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	1465 (43.2)
Roll Dimensions (length x width)	--	m (ft)	3.6 (12) x 61 (200)
Roll Area	--	m ² (yd ²)	220 (266.6)
Estimated Roll Weight	---	kg (lbs)	338 (745)

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