



# GEOTEXTILES PRODUCT DATA

## FOR MORE INFORMATION

*Geosynthetics* magazine has provided information on the geotextile specification charts for comparative purposes only. Designers should contact manufacturers for additional details and to discuss site-specific considerations.

Information on the use and specification of geotextiles is also available from the Geosynthetic Materials Association (GMA).

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## PUBLISHER'S NOTE

*Geosynthetics* magazine compiled all information included in the 2022 *Geosynthetics Specifier's Guide* from information submitted by firms in the geosynthetics industry. Companies provided specifications voluntarily, and specification accuracy is the responsibility of the manufacturer. The appearance of a listing in this directory is not an endorsement of the company or product by *Geosynthetics* magazine or the Industrial Fabrics Association International (IFAI). The 2022 *Geosynthetics Specifier's Guide* is intended as a guide, and *Geosynthetics* magazine and IFAI encourage readers to contact the companies listed for further information.

Manufacturers engineer these products to provide cost-effective solutions and to meet specific design requirements for separation, reinforcement, filtration, drainage and protection applications.

Although engineers have developed numerous applications for geotextiles, there are five major functions: separation, reinforcement, filtration, drainage and protection. The major geotextile classifications are woven, nonwoven and knitted. Generally, woven fabrics exhibit high tensile strength, high modulus and low elongation. Needle-punched nonwoven fabrics typically have high permeability as a result of high porosity and conformability because of their high elongation characteristics. Thermally spun, bonded, nonwoven fabrics typically have high modulus, compared to needle-punched nonwoven fabrics, and high conformability. Depending on the manufacturing process, knitted geotextiles can offer high tensile strength and elasticity.

Geotextiles are available in a variety of structures and polymer compositions designed to meet a wide range of applications. It is important that all geotextiles be composed of strong, durable, chemically inert polymeric materials that are resistant to the effects of site-specific ground conditions, weather and aging.

In permanent installations, long-term material performance is a result of the polymer structure's durability. Depending on the application, geotextiles may have other survivability requirements, such as creep resistance, resistance to temperature and ultraviolet exposure.

## The numbers

Companies that submitted product data chart lines were asked to provide data determined through industry-accepted testing methods. Companies were asked to sign a certificate of compliance verifying the accuracy of this data.

Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications					Other Manufacturer's Suggested Applications [8]
	Filtration/Hydraulic Properties					Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%					
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4633 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
										MD	XD	MD	XD			
<b>ACE Geosynthetics Inc.</b>   <a href="http://www.geoace.com">www.geoace.com</a>																
ACETex ES520 (W/PP)	NP	NP	0.425 (40)	1.10/3300 (80), CH	10.0 (2245)	1.0 x 1.0 (225 x 225)	2.5 x 2.5 (560 x 560)/ NP	1, 2, 3	SP, ST	35 (200)	45 (257)	70 (400)	70 (400)	NP	NP	F, R, SP, ST
ACETex ES710 (W/PP)	NP	NP	0.425 (40)	0.4/1200 (29), CH	9.0 (2021)	NP	2.0 x 2.0 (449 x 449)/ NP	1, 2, 3	SP, ST	45 (257)	60 (343)	70 (400)	70 (400)	NP	NP	F, R, SP, ST
ACETex GT500-II (W/PET)	NP	NP	NP	NP	NP	NP	NP	NP	ST	NP	NP	500 (2860)	500 (2860)	336 (22995)	289 (19778)	R, SP, ST
ACETex GT1400-I (W/PET)	NP	NP	NP	NP	NP	NP	NP	NP	ST	490 (2800)	NP	1400 (8000)	100 (570)	940 (64331)	810 (55434)	R
<b>AFITEX-Texel Geosynthetics Inc.</b>   <a href="http://www.draintube.net">www.draintube.net</a>																
GEOTER FPET 200 (K/PET)	351 (10)	NA	NA	NA	3.6 (809)	NP	NP	NA	NA	95 (542)	NA	200 (1142)/10	10 (57)/10	NP	NP	R, ST, SP
GEOTER FPET 1200/100 (K/PET)	1688 (50)	NA	NA	NA	9.0 (2023)	NP	NP	NA	NA	450 (2570)	45 (257)	1200 (6852)/10	100 (571)/10	NP	NP	R, ST, SP
GEOTER WPET 1000-50 (K/PET)	1350 (40)	NA	NA	NA	10.8 (2428)	NP	NP	NA	NA	350 (2000)	20 (114)	1000 (5710)/10	50 (286)/10	NP	NP	R, ST
<b>AGRU America Inc.</b>   <a href="http://www.agruamerica.com">www.agruamerica.com</a>																
Agrutex 041 (NW-P/PP)	136 (4)	NA	0.212 (70)	1.8/CH 5467 (135)	1.5 (335)	0.223 (50)	0.445 (120)/50	3	D, SP	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P
Agrutex 061 (NW-P/PP)	203 (6)	NA	0.212 (70)	1.5/CH 4479 (110)	1.9 (435)	0.289 (65)	0.756 (170)/50	2, 3	D, SP, ST	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P
Agrutex 081 (NW-P/PP)	271 (8)	NA	0.180 (80)	1.3/CH 3895 (95)	2.7 (600)	0.423 (95)	0.979 (220)/50	1, 2, 3	F, E, SP, ST	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P, R
Agrutex 101 (NW-P/PP)	339 (10)	NA	0.150 (100)	1.1/CH 3280 (80)	3.2 (725)	0.467 (105)	1.20 (270)/50	1, 2, 3	F, E, SP, ST	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P, R
Agrutex 121 (NW-P/PP)	401 (12)	NA	0.150 (100)	1.0/CH 2870 (60)	4.1 (925)	0.556 (125)	1.42 (320)/50	1, 2, 3	F, E, SP, ST	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P, R
Agrutex 161 (NW-P/PP)	544 (16)	NA	0.150 (100)	0.7/CH 2050 (50)	5.0 (1125)	0.668 (150)	1.74 (390)/50	1, 2, 3	F, E, SP, ST	NA	NA	NA	NA	NA	NA	S/T, S/P, F, D, E, P, R
<b>BTL Liners</b>   <a href="http://www.btl liners.com">www.btl liners.com</a>																
Non-woven Geotextile (NW-p)			0.18 (80)	1.4/3870 (95), CH	2.2 (500)	0.356 x 0.356 (80 x 80)	0.912 x 0.912 (205 x 205)/50 x 50	1, 2, 3	D, E, SP, ST							F, P

- [1] NW = Non woven, -P = needlepunched, -h = calendered
- W = Woven, -SF = slit film t = thermally bonded
- K = Knitted O/C = Other/combination
- [2] PP = Polypropylene, PET = Polyester, \* = average
- [3] FH = Test is run by the falling head method
- CH = Test is run by the constant head method
- [4] SP = Separation S/F = Silt Fence
- ST = Stabilization D = Drainage
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- A/O = Asphalt overlay SSG = Subgrade Stabilization Geosynthetic
- [5] MD = Machine direction XD = Cross-machine direction

- [6] For a minimum of 10,000 hours, extrapolated to a 75 year time period
- [7]  $LTDS = \frac{T_{ult}}{RF_{cr} \times RF_{id} \times RF_d}$
- RF<sub>cr</sub> = Reduction factor for creep
- RF<sub>id</sub> = Reduction factor for installation damage
- RF<sub>d</sub> = Reduction factor for durability

NOTE: this equation does not include other reduction factors which may apply to design. Reduction factors are site specific and should be reviewed on a per project basis. Contact the manufacturer for recommendations.

- [8] R = Reinforcement P = Protection
  - SP = Separation S/F = Silt Fence
  - ST = Stabilization D = Drainage
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  - RC = Reinforcement Composite A/O = Asphalt overlay
  - SSG = Subgrade Stabilization Geosynthetic
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- Companies were requested to provide minimum average roll values (MARV). All claims are the responsibility of the manufacturer.

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Product Name (Structure [1]/ Polymer Type [2])	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	M288 Transportation-Related Applications								Reinforcement Applications				Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	Other Manufacturer's Suggested Applications [8]
		Filtration/Hydraulic Properties				Physical Properties				Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%						
		Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]				
										MD	XD	MD	XD			

**Carthage Mills** | [www.carthagemills.com](http://www.carthagemills.com)

<b>Carthage 6% (W-PP)</b>	NA	4-6	0.212 (70)	0.28/733 (18), CH	4.23 (950)	0.44 x 0.27 (100 x 60)	1.64 x 1.11 (370 x 250)/15	2	D, E (15-50% & >50%)	NA	NA	39.4 (225)	25.4 (145)	NA	NA	E, F, S, S/F, ST, SP, R
<b>FX-55 (W-PP)</b>	NA	<1	0.425 (40)	0.05/204 (5), FH	3.11 (700)	0.33 (75)	0.89 (200)/15	3	SP, ST	NA	NA	21.0 (120)	21 (120)	NA	NA	SP, ST, R
<b>FX-66 (W-PP)</b>	NA	<1	0.425 (40)	0.05/160 (4), FH	4.0 (900)	0.51 (115)	1.40 (315)/15	2, 1	SP, ST	NA	NA	30.6 (175)	35 (200)	NA	NA	SP, ST, R
<b>FX-400MF (W-PP)</b>	NA	NA	0.60 (30)	0.40/1222 (30), CH	NP	NP	NP	NA	NA	35 (200)	39.4 (225)	70 (400)/9	70 (400)/9	NA	NA	SP, ST, R
<b>FX-45HS (NW-PP-P-h)</b>	NA	NA	0.212 (70)	1.70/4890 (120), CH	1.38 (310)	0.22 (50)	0.53 (120)/50	3	D, SP, ST	NA	NA	NA	NA	NA	NA	D, SP
<b>FX-60HS (NW-PP-P-h)</b>	NA	NA	0.212 (70)	1.50/4480 (110), CH	1.82 (410)	0.27 (60)	0.71 (160)/50	2	D, SP, ST, E	NA	NA	NA	NA	NA	NA	D, SP, ST, E
<b>FX-80HS (NW-PP-P-h)</b>	NA	NA	0.180 (80)	135/3666 (90), CH	2.23 (500)	0.36 (80)	0.91 (205)/50	1	D, SP, ST, E	NA	NA	NA	NA	NA	NA	D, SP, ST, E

**Dalco Nonwovens** | [www.dalcononwovens.com](http://www.dalcononwovens.com)

<b>Dalco 1031 (NW-P/PP)</b>	NP	NP	0.30 (50)	2.2/6927 (170), CH	0.934 (210)	0.11 (25)	0.35 (80)/50	NP	NP	NA	NA	NA	NA	NA	NA	F, D, E
<b>Dalco 1035 (NW-P/PP)</b>	NP	NP	0.30 (50)	2.1/6095 (165), CH	1.157 (260)	0.178 (40)	0.401 (90)/50	NP	NP	NA	NA	NA	NA	NA	NA	F, D, E
<b>Dalco 1040 (NW-P/PP)</b>	NP	NP	0.212 (70)	2.0/5700 (140), CH	1.379 (310)	0.202 (45)	0.45 (100)/50	NP	NP	NA	NA	NA	NA	NA	NA	F, D, E
<b>Dalco 1045 (NW-P/PP)</b>	NP	NP	0.212 (70)	1.8/4885 (120), CH	1.490 (335)	0.22 (50)	0.54 (120)/50	3	SP, D, F, E	NA	NA	NA	NA	NA	NA	F, D, E
<b>Dalco 1060 (NW-P/PP)</b>	NP	NP	0.212 (70)	1.4/4479 (110), CH	1.824 (410)	0.269 (60)	0.71 (160)/50	2	SP, D, F, E	NP	NP	NP	NP	NP	NP	P
<b>Dalco 1070 (NW-P/PP)</b>	NP	NP	0.212 (70)	1.4/4479 (110), CH	2.046 (460)	0.333 (75)	0.80 (180)/50	2	SP, D, F, E	NP	NP	NP	NP	NP	NP	P
<b>Dalco 1080 (NW-P/PP)</b>	NP	NP	0.18 (80)	1.3/4074 (100), CH	2.335 (525)	0.359 (80)	0.91 (205)/50	1	ST, SP, D, F, E	NP	NP	NP	NP	NP	NP	P
<b>Dalco 1100 (NW-P/PP)</b>	NP	NP	0.18 (80)	1.2/3251 (80), CH	2.780 (625)	0.444 (100)	1.1 (250)/50	1	ST, SP, D, F, E	NP	NP	NP	NP	NP	NP	P
<b>Dalco 1120 (NW-P/PP)</b>	NP	NP	0.15 (100)	0.9/3055 (75), CH	3.670 (825)	0.51 (115)	1.33 (300)/50	1	ST, SP, D, F, E	NP	NP	NP	NP	NP	NP	P
<b>Dalco 1160 (NW-P/PP)</b>	NP	NP	0.15 (100)	0.7/2035 (50), CH	4.559 (1025)	0.644 (145)	1.69 (380)/50	1	ST, SP, D, F, E	NP	NP	NP	NP	NP	NP	P

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- A/O = Asphalt overlay SSG = Subgrade Stabilization Geosynthetic
- [5] MD = Machine direction XD = Cross-machine direction

- [6] For a minimum of 10,000 hours, extrapolated to a 75 year time period  $T_{ult}$
- [7]  $LTDS = \frac{RF_{CR} \times RF_{ID} \times RF_D}{T_{ult}}$
- RF<sub>CR</sub> = Reduction factor for creep
- RF<sub>ID</sub> = Reduction factor for installation damage
- RF<sub>D</sub> = Reduction factor for durability
- NOTE: this equation does not include other reduction factors which may apply to design. Reduction factors are site specific and should be reviewed on a per project basis. Contact the manufacturer for recommendations.

- [8] R = Reinforcement P = Protection
- SP = Separation S/F = Silt Fence
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- Companies were requested to provide minimum average roll values (MARV). All claims are the responsibility of the manufacturer.

Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications					Other Manufacturer's Suggested Applications [8]
	Filtration/Hydraulic Properties				Physical Properties						Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%					
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
										MD	XD	MD	XD			

**GEONIA** | www.geonia.com

Geonia DML-10 (W/PET)	220 (6.49)	NA	100	0.03/90 (2.21) CH	4.0 (898)	NA	2.50/20 (0.56)	NA	NA	50 (285)	25 (143)	100/10 (570)	50/10 (285)	65 (4477)	52 (3359)	R
Geonia DML-20 (W/PET)	370 (10.9)	NA	100	0.3/900 (22.1) CH	8.0 (1796)	NA	NA	NA	NA	100 (570)	25 (143)	200/10 (1142)	50/10 (285)	131 (8954)	103 (7078)	R
Geonia DML-30 (W/PET)	510 (15.0)	NA	200	0.3/900 (22.1) CH	10 (2245)	NA	NA	NA	NA	130 (742)	25 (143)	300/10 (1713)	50/10 (285)	196 (13431)	155 (10617)	R
Geonia DML-40 (W/PET)	660 (19.5)	NA	200	0.3/900 (22.1) CH	12 (2694)	NA	NA	NA	NA	150 (857)	25 (143)	400/10 (2284)	50/10 (285)	261 (17908)	207 (14156)	R
Geonia DML-50 (W/PET)	810 (23.9)	NA	100	0.05/150 (3.7) CH	NPD	NA	NA	NA	NA	180 (1026)	25 (143)	500/10 (2855)	50/10 (285)	327 (22385)	258 (17695)	R
Geonia DML-60 (W/PET)	980 (28.9)	NA	100	0.05/150 (3.7) CH	NPD	NA	NA	NA	NA	200 (1142)	25 (143)	600/10 (3426)	50/10 (285)	392 (26862)	310 (21235)	R
Geonia DML-70/10 (W/PET)	1170 (34.5)	NA	150	0.1/300 (7.4) CH	NPD	NA	NA	NA	NA	260 (1482)	45 (257)	700/10 (3997)	100/10 (570)	458 (31339)	362 (24774)	R
Geonia DML-80/10 (W/PET)	1400 (41.3)	NA	200	0.3/900 (22.1) CH	NPD	NA	NA	NA	NA	400 (2284)	45 (257)	800/10 (4568)	100/10 (570)	523 (35816)	413 (28313)	R
Geonia DML-100/10 (W/PET)	1700 (50.1)	NA	200	0.3/900 (22.1) CH	NPD	NA	NA	NA	NA	450 (2570)	45 (257)	1000/10 (5710)	100/10 (570)	654 (44770)	517 (35391)	R
Geonia DM-10/10 (W/PET)	290 (8.55)	NA	200	0.3/900 (22.1) CH	8 (1800)	NA	NA	NA	NA	45 (257)	45 (257)	100/10 (570)	100/10 (570)	65 (4477)	52 (3359)	R, SP, ST

**Hanes Geo Components** | www.hanesgeo.com

TerraTex GS (W-SF/PP)	NA	1	0.425 (40)	0.05/203 (5), CH	3.12 (700)	0.333 (75)	0.90 (200)/15	3	SP, ST	NP	NP	NP	NP	NP	NP	E
TerraTex HD (W-SF/PP)	NA	1	0.425 (40)	0.05/163 (4), CH	4.45 (1000)	0.533 (120)	1.40 (315)/15	1, 2, 3	SP, ST	NP	NP	NP	NP	NP	NP	E
TerraTex N04.5 (NW-P/PP)	NA	NA	0.212 (70)	1.7/4885 (120), CH	1.46 (340)	0.222 (50)	0.533 (120)/50	3	D, SP, ST, E	NP	NP	NP	NP	NP	NP	F, S/F
TerraTex N06 (NW-P/PP)	NA	NA	0.212 (70)	1.5/4480 (110), CH	1.82 (410)	0.267 (60)	0.711 (160)/50	2, 3	SP, D	NP	NP	NP	NP	NP	NP	F, S/F, E
TerraTex N08 (NW-P/PP)	NA	NA	0.180 (80)	1.35/3657 (90), CH	2.38 (535)	0.378 (85)	0.911 (205)/50	1, 2, 3	ST, SP, E, D	NP	NP	NP	NP	NP	NP	F, E
TerraTex HPG-27 (W/PP)	NA	NA	0.60 (30)	0.7/2037 (50), CH	NP	NP	NP	2, 3	SP	17.7 (101)	19.8 (113)	38.5 (220)	35.9 (205)	NP	NP	D, F, E, S/F, ST
TerraTex HPG-37 (W/PP)	NA	NA	0.60 (30)	0.52/1630 (40), CH	NP	NP	NP	1, 2, 3	SP	21.9 (125)	22.8 (130)	52.5 (300)	48.2 (275)	NP	NP	E, F, D, ST, R, S/F
TerraTex HPG-57 (W/PP)	NA	NA	0.60 (30)	0.4/1222 (30), CH	NP	NP	NP	1, 2, 3	ST, SP	35.0 (200)	39.4 (225)	70 (400)	70 (400)	NP	NP	R, E, S/F

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										MD	XD	MD	XD				

**HUESKER Inc.** | www.huesker.com

Stabilenka® 200 (W/PET)	400 (11.8)	NA	NA	NA	NA	NA	NA	NA	NA	100 (570)	NA	200/10 (1142)	N/A	130 (8899)	101 (6918)	R
Stabilenka® 300 (W/PET)	560 (16.5)	NA	NA	NA	NA	NA	NA	NA	NA	150 (856)	NA	300/10 (1710)	N/A	195 (13,344)	151 (10,368)	R
Stabilenka® 400 (W/PET)	700 (21)	NA	NA	NA	NA	NA	NA	NA	NA	200 (1141)	NA	400/10 (2280)	N/A	260 (17,797)	214 (14,704)	R
Stabilenka® 600 (W/PET)	1020 (30)	NA	NA	NA	NA	NA	NA	NA	NA	300 (1712)	NA	600/10 (3425)	N/A	390 (26,696)	322 (22,062)	R
Stabilenka® 800 (W/PET)	1380 (40.7)	NA	NA	NA	NA	NA	NA	NA	NA	400 (2283)	NA	800/10 (4565)	N/A	519 (35,584)	429 (29,408)	R
Stabilenka® 1000 (W/PET)	1800 (53)	NA	NA	NA	NA	NA	NA	NA	NA	500 (2854)	NA	1000/10 (5708)	N/A	649 (44,480)	536 (36,760)	R

**L & M Supply** | www.landmsupplyco.com

LM400 NT (NW-P/PP)	NP	N/A	.212 (70)	2.1/6095 (150), FH	1.11 (250)	0.178 (40)	.400 (90)/50	NP	NP	N/A	N/A	N/A	N/A	N/A	N/A	F, D, E
LM600 NT (NW-P/PP)	NP	N/A	.212 (70)	1.5/4880 (110), FH	1.82 (410)	0.267 (60)	0.711 (160)/50	2	SP, D	N/A	N/A	N/A	N/A	N/A	N/A	S/F, F, E
LM800 NT (NW-P/PP)	NP	N/A	0.18 (80)	1.35/3657 (90), FH	2.33 (525)	0.356 (80)	0.911 (205)/50	1	SP, D, ST, E	N/A	N/A	N/A	N/A	N/A	NA	S/F, F, D, E
LM1000 NT (NW-P/PP)	NP	N/A	0.15 (100)	1.1/3251 (80), FH	2.89 (650)	0.444 (100)	1.11 (250)/50	1	SP, D, ST, E	N/A	N/A	N/A	N/A	N/A	N/A	S/F, F, D, E
LM1600 NT (NW-P/PP)	NP	N/A	0.15 (100)	0.7/2035 (50), FH	4.56 (1025)	0.644 (145)	1.69 (380)/50	1	SP, D, ST, E	N/A	N/A	N/A	N/A	N/A	N/A	S/F, F, D, E
LM200 NT (W-SP/PP)	NP	1	0.43 (40)	0.05/200 (5), FH	3.11 (700)	0.330 (75)	0.9 (200)/15	3	SP, ST	N/A	N/A	N/A	N/A	N/A	N/A	
LM315 NT (W-SP/PP)	NP	1	0.43 (40)	0.05/163 (4), FH	4.0 (900)	0.533 (75)	1.4 (315)/15	1, 2, 3	SP, ST	N/A	N/A	N/A	N/A	N/A	N/A	
LM2199 FW	NP	4	0.212 (70)	0.28/733 (18)	4.2 (950)	0.445 x 0.267 (100 x 60)	1.6 x 1.1 (370 x 250) 15 x 15	2, 3	D, E	N/A	N/A	N/A	N/A	N/A	N	S/F Bulk Head
LM270 HP	NP	N/A	0.60 (30)	0.7/2037 (50)	4.5 (1000)	N/A	1.3 x 1.2 (295 x 250)			17.7 (1212)	19.8 (1356)	38.5 (2640)	35.9 (2460)	N/A		
LM570 HP	NP	N/A	0.60 (30)	0.40/1222 (30)	8.9 (2000)	N/A	2.2 x 2.1 (500 x 475) 11 x 4	1A	Enhanced Stabilization	35.0 (2400)	39.4 (2700)	70.0 (4800)	70.0 (4800)	N/A		

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- [4] SP = Separation S/F = Silt Fence
- ST = Stabilization D = Drainage
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- A/O = Asphalt overlay SSG = Subgrade Stabilization Geosynthetic
- [5] MD = Machine direction XD = Cross-machine direction

- [6] For a minimum of 10,000 hours, extrapolated to a 75 year time period  $T_{ult}$
- [7] LTDS = 
$$\frac{RF_{CR} \times RF_{ID} \times RF_D}{T_{ult}}$$
  - RF<sub>CR</sub> = Reduction factor for creep
  - RF<sub>ID</sub> = Reduction factor for installation damage
  - RF<sub>D</sub> = Reduction factor for durability
- NOTE: this equation does not include other reduction factors which may apply to design. Reduction factors are site specific and should be reviewed on a per project basis. Contact the manufacturer for recommendations.

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Product Name (Structure [1]/ Polymer Type [2])	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	M288 Transportation-Related Applications									Reinforcement Applications						Other Manufacturer's Suggested Applications [8]
		Filtration/Hydraulic Properties				Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%				Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
		Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]					
										MD	XD	MD	XD				
<b>Layfield Environmental Containment</b>   <a href="http://www.layfieldgroup.com">www.layfieldgroup.com</a>																	
Geovolt, Conductive Textile	NP	NP	NP	NP	1.33 (300)	0.22 (50)	0.58 (130) / 50%	NP	NP	NP	NP	NP	NP	NP	NP	NP	Leak location under any non-conductive barrier
<b>Maccaferri Inc.</b>   <a href="http://www.maccaferri.com/us">www.maccaferri.com/us</a>																	
MacTex N47.1 (NW-P/PP)	NP	NP	0.18 (80)	1.4 / 3657 (95)	2.38 (535)	0.378 (85)	0.911 (205) / 50	>>1	ST, SP, D, F, E	NA	NA	NA	NA	NA	NA	NA	NA
<b>Propex GeoSolutions</b>   <a href="http://www.propexglobal.com">www.propexglobal.com</a>																	
GEOTEX* 401 (NW-P/PP)	NA	NA	0.212 (70)	1.7/5,704 (140), CH	1,379 (310)	222 (50)	534 (120)/50	3	SP, ST, D	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
GEOTEX* 601 (NW-P/PP)	NA	NA	0.212 (70)	1.5/4,482 (110), CH	1,824 (410)	267 (60)	712 (160)/50	2, 3	SP, ST, D, E	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
GEOTEX* 801 (NW-P/PP)	NA	NA	0.180 (80)	1.5/4,482 (110), CH	2,335 (525)	356 (80)	912 (205)/50	1, 2, 3	SP, ST, D, E	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
GEOTEX* 1001 (NW-P/PP)	NA	NA	0.150 (100)	1.2/3,260 (80), CH	3,114 (700)	445 (100)	1,112 (250)/50	1, 2, 3	SP, ST, D, E	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
GEOTEX* 1601 (NW-P/PP)	NA	NA	0.150 (100)	0.7/2,037 (50), CH	4,804 (1080)	645 (145)	1,690 (380)/50	1, 2, 3	SP, ST, D, E	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
GEOTEX* 200ST (W-PP)	NA	NA	0.425 (40)	0.05/163 (4), FH	3,114 (700)	334 (75)	890 (200)/15	3	SP, ST	NA	NA	NA	NA	NA	NA	NA	SP, ST
GEOTEX* 350ST (W-PP)	NA	NA	0.600 (30)	0.05/163 (4), FH	4,448 (1,000)	445 (100)	1,557 x 1,557 (350 x 350)/25	NA	NA	19.8 (113)	19.8 (113)	52.5 (300)/8	47.3 (270)/8	NA	NA	NA	R, SP, ST
GEOTEX* 2X2HF (W-PP)	NA	NA	0.600 (30)	0.6/1,630 (40), FH	4,448 (1,000)	578 x 445 (130 x 100)	NA	NA	NA	18.6 (106)	21.0 (120)	38.5 (220)/7	35.9 (205)/7	NA	NA	NA	R, SP, ST, F, D, E
GEOTEX* 3X3HF (W-PP)	NA	NA	0.600 (30)	0.80 / 2445 (60), FH	7,117 (1,600)	801 x 623 (180 x 140)	NA	1, 2, 3	SP, ST, D, E	20.3 (116)	25.4 (145)	52.5 (300)/10	52.5 (300)/10	NA	NA	NA	R, SP, ST, F, D, E
GEOTEX* 4X4HF (W-PP)	NA	NA	0.600 (30)	0.4/1,222 (30), FH	8,896 (2,000)	801 x 801 (180 x 180)	NA	NA	NA	35.0 (200)	43.8 (225)	70.1 (400)/9	70.1 (400)/9	NA	NA	NA	R, SP, ST, F, D, E
GEOTEX* 3X3 UF (W-PP)	NA	NA	0.425 (40)	1.09 / 3,260 (80) FH	NA	NA	NA	1, 2, 3	SP, ST, D, E	26.3 (150)	32.9 (188)	NA	NA	NA	NA	NA	R, SP, ST, F, D, E
GEOTEX* 4X4 UF (W-PP)	NA	NA	0.425 (40)	1/3,056 (75), FH	NA	NA	NA	1, 2, 3	SP, ST, D, E	21 (120)	63.9 (365)	NA	NA	NA	NA	NA	R, SP, ST, F, D, E

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RF<sub>cr</sub> = Reduction factor for creep  
RF<sub>ID</sub> = Reduction factor for installation damage  
RF<sub>D</sub> = Reduction factor for durability

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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications				Other Manufacturer's Suggested Applications [8]	
	Filtration/Hydraulic Properties					Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%					
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)		LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)
										MD	XD	MD	XD			

**Propex GeoSolutions** | [www.propexglobal.com](http://www.propexglobal.com)

<b>GEOTEX® 401 DND (NW-P/PP)</b>	NA	NA	0.212 (70) (TYPICAL)	2.0/6,112 (150), CH (TYPICAL)	1,379 (310) (TYPICAL)	222 (50) (TYPICAL)	534 (120)/70 (TYPICAL)	NA	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
<b>GEOTEX® 601 DND (NW-P/PP)</b>	NA	NA	0.212 (70) (TYPICAL)	2.0/6,112 (150), CH (TYPICAL)	2,193 (493) (TYPICAL)	378 (85) (TYPICAL)	881 (198)/70 (TYPICAL)	NA	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
<b>GEOTEX® 801 DND (NW-P/PP)</b>	NA	NA	0.180 (80) (TYPICAL)	1.7/ 4,482 (110), CH (TYPICAL)	2,891 (650) (TYPICAL)	423 (95) (TYPICAL)	1,068 (240) / 70 (TYPICAL)	NA	NA	NA	NA	NA	NA	NA	NA	F, D, E, ST, SP
<b>PETROMAT® Enviro™</b>	140 (4.1)	NA	NA	NA	NA	NA	450 (101) / 50	Type 2	A/O	NA	NA	NA	NA	NA	NA	A/O
<b>PETROMAT® 4598 (NW-P/PP)</b>	140 (4.1)	NA	NA	NA	NA	NA	450 (101) / 50	Type 2	A/O	NA	NA	NA	NA	NA	NA	A/O
<b>PETROMAT® Plus-White 4597 (NW-P/PP)</b>	156 (4.6)	NA	NA	NA	NA	NA	534 (120) / 50	NA	NA	NA	NA	NA	NA	NA	NA	A/O
<b>PETROMAT® Plus-White 4598 (NW-P/PP)</b>	140 (4.1)	NA	NA	NA	NA	NA	450 (101) / 50	Type 2	A/O	NA	NA	NA	NA	NA	NA	A/O
<b>PETROMAT® Plus-White 4599 (NW-P/PP)</b>	122 (3.6)	NA	NA	NA	NA	NA	400 (90) / 50	NA	NA	NA	NA	NA	NA	NA	NA	A/O
<b>GEOTEX® 1341 NH (NW-P/PP)</b>	509 (15.0) (TYPICAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.0 (57)	10.0 (57)	NA	NA	SP, F, P
<b>REFLECTEX® 1541 (NW-P/PP)</b>	498 (14.7)	NA	N	NA	NA	NA	NA	NA	NA	NA	NA	10.0 (57)	10.0 (57)	NA	NA	SP, F, P
<b>REFLECTEX® 1341 (NW-P/PP)</b>	509 (15.0) (TYPICAL)	NA	N	NA	NA	NA	NA	NA	NA	NA	NA	10.0 (57) (TYPICAL)	10.0 (57) (TYPICAL)	NA	NA	SP, F, P

**Saint-Gobain ADFORS America** | [www.adfors.com](http://www.adfors.com)

<b>GlasPave 25 (N/W,O/C), (FG/PET)</b>	136 (4.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	25 (140)* / <5%	25 (140)* / <5%	NA	NA	A/O, PR
<b>GlasPave 50 (N/W,O/C), (FG/PET)</b>	237 (7.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 (280)* / <5%	50 (280)* / <5%	NA	NA	A/O, PR

♦Tensile test performed under ASTM D5035

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Product Name (Structure [1]/ Polymer Type [2])	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	M288 Transportation-Related Applications								Reinforcement Applications						Other Manufacturer's Suggested Applications [8]
		Filtration/Hydraulic Properties			Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%				Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
		Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]				
MD	XD	MD	XD	MD	XD	MD	XD	MD	XD	MD	XD	MD	XD			
<b>SKAPS Industries</b>   www.skaps.com																
GC140 (NW-P/PP)	143 (4.2)	NA	NA	NA	1.33 (300)	0.200 (45)	0.453 (102)/50	NP	NP	NA	NA	NA	NA	NA	NA	A/O
GE116 (NW-P/PP)	542 (16)	NA	0.150 (100)	0.57/1833 (45), CH	5.34 (1200)	0.667 (150)	1.89 (425)/50	1	SP, E	NA	NA	NA	NA	NA	NA	S/F, F, D, P, E
GE160 (NW-P/PP)	203 (6)	NA	0.212 (70)	1.63/5080 (125), CH	2.0 (450)	0.290 (65)	0.711 (160)/50	2	SP, D	NA	NA	NA	NA	NA	NA	S/F, F, D, P, E
GE180 (NW-P/PP)	271 (8)	NA	0.180 (80)	1.26/4074 (100), CH	2.67 (600)	0.400 (90)	1.00 (225)/50	1	SP, D, ST	NA	NA	NA	NA	NA	NA	S/F, F, D, P, E
GT110 (NW-P/PP)	NP	NA	0.150 (100)	1.20/3251 (80), CH	3.11 (700)	0.444 (100)	1.11 (250)/50	1	SP, D, ST, E	NA	NA	NA	NA	NA	NA	S/F, F, D, E
GT116 (NW-P/PP)	NP	NA	0.150 (100)	0.70/2035 (50), CH	4.80 (1080)	0.644 (145)	1.69 (380)/50	1	SP, D, ST, E	NA	NA	NA	NA	NA	NA	S/F, F, D, E
GT135 (NW-P/PP)	NP	NA	0.300 (50)	2.0/6095 (150), CH	1.18 (265)	0.178 (40)	0.401 (90)/50	NP	NP	NA	NA	NA	NA	NA	NA	F, D, E
GT142 (NW-P/PP)	NP	NA	0.212 (70)	1.7/5500 (135), CH	1.38 (310)	0.222 (50)	0.533 (120)/50	3	S/F	NA	NA	NA	NA	NA	NA	F, D, E
GT160 (NW-P/PP)	NP	NA	0.212 (70)	1.5/4480 (110), CH	1.82 (410)	0.267 (60)	0.711 (160)/50	2	SP, D	NA	NA	NA	NA	NA	NA	S/F, F, E
GT180 (NW-P/PP)	NP	NA	0.180 (80)	1.35/3657 (90), CH	2.38 (535)	0.378 (85)	0.911 (205)/50	1	SP, D, ST, E	NA	NA	NA	NA	NA	NA	S/F, F, E, D
SW200 (W-SF/PP)	NP	1	0.425 (40)	0.05/203 (5), CH	3.11 (700)	0.333 (75)	0.90 (200)/15	3	NP	NP	NP	NP	NP	NP	NP	NP
SW315 (W/PP)	NP	1	0.425 (40)	0.05/163 (4), CH	4.45 (1000)	0.533 (120)	1.40 (315)/15	1	SP, ST	NP	NP	NP	NP	NP	NP	SF

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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications					Other Manufacturer's Suggested Applications [8]
	Filtration/Hydraulic Properties					Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%					
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
										MD	XD	MD	XD			
<b>Solmax</b>   www.solmax.com																
NW6 (NW-P/PP)	200 (6)	NA	0.212 (70)	1.5 4480 (110)	0.395 (90)	0.29 (65)	0.71 (160)/50	2	SP, D, F, E, A/O	NP	NP	NP	NP	NP	NP	NP
NW8 (NW-P/PP)	270 (8)	NA	0.18 (80)	1.3 3865 (95)	0.525 (120)	0.40 (90)	0.97 (220)/50	1	SP, D, F, E, P	NP	NP	NP	NP	NP	NP	NP
Note: Additional heavy weights are available.																
<b>TechFab India</b>   www.techfabindia.com																
TFI-3200HT (W/PET)	NP	NP	0.25 (60)	0.02/240 (5.89), CH	15 (3372)	NA	NA	NP	NP	80 (457)	80 (457)	200 (1142)	200 (1142)	140 (9590)	NP	R
R 42 (NW/PP)	NP	NP	0.212 (70)	1.5/4500 (110), CH	1.51 (340)	0.214 (48)	0.534 (120)/50	3	SP, ST, F, D, E	NA	NA	9.0 (51)	9.0 (51)	NA	NA	ST, SP, R
TechGeomattress TGMT-105 ((NW+W,+W)/PP)	1050 (30.97)	NP	0.35 (44)	NP	NP	NP	NP	NP	NP	NP	NP	70 (400)	70 (400)	NP	NP	Slope and Shore line Protection, Channel Slopes
TechTube Geotextile Tube TGT-1500Z (PPMF)	430 (12.68)	NP	0.25 (60)	0.2/600 (14.67), CH	10 (2250)	NP	NP	NP	NP	NP	NP	100.0 (567)	100.0 (567)	NP	NP	Slope and Shore line Protection, Dewatering, flood control, Breakwater, Dyke formation

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- [2] PP = Polypropylene, PET = Polyester, \* = average
- [3] FH = Test is run by the falling head method
- CH = Test is run by the constant head method
- [4] SP = Separation S/F = Silt Fence
- ST = Stabilization D = Drainage
- F = Filtration E = Erosion Control
- A/O = Asphalt overlay SSG = Subgrade Stabilization Geosynthetic
- [5] MD = Machine direction XD = Cross-machine direction

- [6] For a minimum of 10,000 hours, extrapolated to a 75 year time period  $T_{ult}$
- [7]  $LTDS = \frac{RF_{CR} \times RF_{ID} \times RF_D}{T_{ult}}$
- RF<sub>CR</sub> = Reduction factor for creep
- RF<sub>ID</sub> = Reduction factor for installation damage
- RF<sub>D</sub> = Reduction factor for durability
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- SP = Separation S/F = Silt Fence
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Product Name (Structure [1]/ Polymer Type [2])	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	M288 Transportation-Related Applications										Reinforcement Applications				Other Manufacturer's Suggested Applications [8]
		Filtration/Hydraulic Properties				Physical Properties						Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%				
		Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
										MD	XD	MD	XD			
Mirafi 140NC (NW-P/PP)	NA	NA	0.212 (70)	2.0/5704 (140), CH	1.1 (250)	0.2 x 0.2 (45 x 45)	0.445 x 0.445 (100 x 100)/50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	F, D, E
Mirafi 140N (NW-P/PP)	NA	NA	0.212 (70)	1.7/5500 (135), CH	1.4 (310)	0.223 x 0.223 (50 x 50)	0.534 x 0.534 (120 x 120)/50 x 50	3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F
Mirafi 160N (NW-P/PP)	NA	NA	0.212 (70)	1.5/4481 (110), CH	1.8 (410)	0.267 x 0.267 (60 x 60)	0.712 x 0.712 (160 x 160)/50 x 50	2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F
Mirafi 180N (NW-P/PP)	NA	NA	0.18 (80)	1.4/3870 (95), CH	2.2 (500)	0.356 x 0.356 (80 x 80)	0.912 x 0.912 (205 x 205)/50 x 50	1, 2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F, P
Mirafi 1100N (NW-P/PP)	NA	NA	0.15 (100)	0.8/3056 (75), CH	3.1 (700)	0.445 x 0.445 (100 x 100)	1.1 x 1.1 (250 x 250)/50 x 50	1, 2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F, P
Mirafi 1120N (NW-P/PP)	NA	NA	0.15 (100)	0.8/2648 (65), CH	3.6 (800)	0.512 x 0.512 (115 x 115)	1.3 x 1.3 (300 x 300)/50 x 50	1, 2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F, P
Mirafi 1160N (NW-P/PP)	NA	NA	0.15 (100)	0.7/2037 (50), CH	4.6 (1025)	0.623 x 0.623 (140 x 140)	1.7 x 1.7 (380 x 380)/50 x 50	1, 2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F, P
Mirafi FW402 (W/PP)	NA	10	0.425 (40)	2.1/5907 (145), CH	3.0 (675)	0.512 x 0.334 (115 x 75)	1.6 x 0.9 (365 x 200)/24 x 10	2, 3	D	7.0 (40)	8.8 (50)	35 (200)	24.5 (140)	NA	NA	E, F
Mirafi FW404 (W/PP)	NA	1	0.425 (40)	0.9/2852 (70), CH	5.1 (1150)	0.668 x 0.734 (150 x 165)	1.8 x 1.4 (400 x 320)/15 x 15	1, 2, 3	D, E	17.5 (100)	17.5 (100)	43.8 (250)	40.3 (230)	NA	NA	F
Mirafi FW500 (W/PP)	NA	3	0.30 (50)	0.2/611 (15), CH	5.3 (1200)	0.534 x 0.534 (120 x 120)	1.7 x 1.7 (375 x 375)/15 x 7	2, 3	D	12.3 (70)	43.8 (250)	35.0 (200)	48.2 (275)	NA	NA	E, F
Mirafi FW700 (W/PP)	NA	4	0.212 (70)	0.28/733 (18), CH	4.2 (950)	0.445 x 0.267 (100 x 60)	1.6 x 1.1 (370 x 250)/15 x 15	2, 3	D, E	12.3 (70)	7.0 (40)	39.4 (225)	25.4 (145)	NA	NA	F

## TenCate Geosynthetics | www.mirafi.com

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- [2] PP = Polypropylene, PET = Polyester, \* = average
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F = Filtration E = Erosion Control  
A/O = Asphalt overlay SSG = Subgrade Stabilization Geosynthetic  
[5] MD = Machine direction XD = Cross-machine direction

- [6] For a minimum of 10,000 hours, extrapolated to a 75 year time period
- $$[7] LTDS = \frac{T_{ult}}{RF_{cr} \times RF_{id} \times RF_d}$$
- RF<sub>cr</sub> = Reduction factor for creep  
RF<sub>id</sub> = Reduction factor for installation damage  
RF<sub>d</sub> = Reduction factor for durability

NOTE: this equation does not include other reduction factors which may apply to design. Reduction factors are site specific and should be reviewed on a per project basis. Contact the manufacturer for recommendations.

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RC = Reinforcement Composite A/O = Asphalt overlay  
SSG = Subgrade Stabilization Geosynthetic  
NP = Not provided by manufacturer  
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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications				Other Manufacturer's Suggested Applications [8]		
	Filtration/Hydraulic Properties					Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%						
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)		LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
										MD	XD	MD	XD				
<b>TenCate Geosynthetics</b>   www.mirafi.com																	
Mirafi HP270 (W/PP)	NA	NA	0.60 (30)	0.60/1630 (40), CH	4.5 (1000)	0.490 x 0.579 (110 x 130)	1.3 x 1.2 (295 x 260)	2, 3	SP	18.6 (106)	21.0 (120)	38.5 (220)	35.9 (205)	NA	NA	R, ST	
Mirafi HP370 (W/PP)	NA	NA	0.60 (30)	0.9/2444 (60), CH	6.5 (4500)	0.601 x 0.556 (135 x 125)	1.8 x 1.3 (400 x 300) 10 x 6	1, 2, 3	SP	21.9 (125)	22.8 (130)	52.5 (300)	47.3 (270)	NA	NA	R, ST	
Mirafi HP570 (W/PP)	NA	NA	0.60 (30)	0.5/1222 (30), CH	8.9 (2000)	0.8 x 0.8 (180 x 180)	2.2 x 2.1 (500 x 475) 11 x 4	1, 2, 3	SP	35.0 (200)	43.8 (250)	70.0 (400)	70.0 (400)	NA	NA	R, ST	
Mirafi RS280i	NA	NA	0.425 (40)	0.9/2852 (70), CH	NA	NA	NA	1, 2, 3	R, SP, ST, F, D	135 (23.6)	136 (23.8)	NA	NA	NA	NA	R, E	
Mirafi RS380i	NA	NA	0.425 (40)	0.9/3056 (75), CH	NA	NA	NA	1, 2, 3	R, SP, ST, F, D	150 (26.3)	188 (32.9)	NA	NA	NA	NA	R, E	
Mirafi RS580i	NA	NA	0.425 (40)	1.0/3056 (75), CH	NA	NA	NA	1, 2, 3	R, SP, ST, F, D, SSG	120 (21.0)	365 (63.9)	NA	NA	NA	NA	R, E	
Mirafi H2Ri	NA	NA	0.425 (40)	0.4/1222 (30), CH	NA	NA	NA	1, 2, 3	R, SP, ST, F, D, SSG	120 (21.0)	315 (55.2)	NA	NA	NA	NA	R, E	
Mirafi S600 (NW-P/PP)	203 (6.0)	NA	0.18 (80)	1.5/4481 (110), CH	2.0 (450)	0.312 x 0.312 (70 x 70)	0.757 x 0.757 (170 x 170) 50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	ST, P	
Mirafi S800 (NW-P/PP)	271 (8.0)	NA	0.15 (100)	1.4/4481 (110), CH	2.7 (600)	0.423 x 0.423 (95 x 95)	1.0 x 1.0 (230 x 230) 50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	ST, P	
Mirafi S1600 (NW-P/PP)	542 (16.0)	NA	0.15 (100)	0.7/2037 (50), CH	5.3 (1200)	0.69 x 0.69 (155 x 155)	1.891 x 1.891 (425 x 425) 50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	ST, P	
MPV400 (NW-P/PP)	119 (3.5)	NA	NA	NA	NA	NA	0.4 x 0.4 (90 x 90) 50 x 50	NA	A/O	NA	NA	NA	NA	NA	NA	A/O	
MPV500 (NW-P/PP)	140 (4.1)	NA	NA	NA	NA	NA	0.449 x 0.449 (101 x 101) 50 x 50	NA	A/O	NA	NA	NA	NA	NA	NA	A/O	

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[6] For a minimum of 10,000 hours, extrapolated to a 75 year time period  $T_{ult}$

[7]  $LTDS = \frac{RF_{CR} \times RF_{ID} \times RF_D}{T_{ult}}$

RF<sub>CR</sub> = Reduction factor for creep  
 RF<sub>ID</sub> = Reduction factor for installation damage  
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Product Name (Structure [1]/ Polymer Type [2])	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	M288 Transportation-Related Applications								Reinforcement Applications						Other Manufacturer's Suggested Applications [8]
		Filtration/Hydraulic Properties			Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%				Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
		Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]				
										MD	XD	MD	XD			

**Tensor International Corp.** | [www.tensor-international.com](http://www.tensor-international.com)

<b>GlasPave® 50</b>	237 (7.0)	NA	NA	NA	NA	NA	50 kN/m (285 lb/in)/ <5%*	NA	NA	NA	NA	NA	NA	0.47 (0.10)	> 232 C (>450 F)	A/O, PR
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♦ Tensile strength per ASTM D 5035

**Texel Technical Materials Inc.** | [www.texel.ca](http://www.texel.ca)

<b>TEXEL060E</b>	203 (6)	NA	0.212 (70)	1.60/5080 (125)	2.000 (450)	0.312 (70)	0.712 (160)/50									
<b>TEXEL080E (NW-PP)</b>	271 (8)	NA	0.180 (80)	1.50/4482 (110)	2.670 (600)	0.423 (95)	1.024 (230)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL100E (NW-PP)</b>	339 (10)	NA	0.150 (100)	0.94/3055 (75)	3.220 (725)	0.470 (106)	1.200 (270)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL120E (NW-PP)</b>	407 (12)	NA	0.150 (100)	0.90/2544 (62)	4.000 (900)	0.556 (125)	1.470 (330)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL140E (NW-PP)</b>	475 (14)	NA	0.150 (100)	0.64/2037 (50)	4.650 (1045)	0.600 (135)	1.730 (389)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL160E (NW-PP)</b>	542 (16)	NA	0.150 (100)	0.57/1833 (45)	5.340 (1200)	0.690 (155)	1.891 (425)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL200E (NW-PP)</b>	675 (20)	NA	0.150 (100)	0.30/1050 (26)	6.200 (1394)	0.800 (180)	2.045 (460)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL240E (NW-PP)</b>	810 (24)	NA	0.150 (100)	0.40/1019 (25)	7.150 (1607)	0.910 (205)	2.220 (500)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL280E (NW-PP)</b>	950 (28)	NA	NP	NP	8.000 (1800)	1.010 (228)	2.500 (562)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST
<b>TEXEL320E (NW-PP)</b>	1085 (32)	NA	NP	NP	8.800 (1978)	1.200 (270)	2.670 (600)/50	NA	NA	NA	NA	NA	NA	NA	NA	P, SP, D, E, ST

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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications				Other Manufacturer's Suggested Applications [8]	
	Filtration/Hydraulic Properties					Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%					
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)		LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)
										MD	XD	MD	XD			

**Typar Geosynthetics** | www.typargeosynthetics.com

<b>Typar 3201 NW-PP-t</b>	65* (1.9)	NA	0.59 (30)	1.0/7790 (190), FH	NP	0.110 (25)	0.267 (60)/60	NP	NP	NP	NP	NP	NP	NP	NA	NA	SP, D
<b>Typar 3301 NW-PP-t</b>	104* (3.0)	NA	0.30 (50)	0.8/3895 (95), FH	NP	0.156 (35)	0.533 (120)/60	NP	NP	NP	NP	NP	NP	NP	NA	NA	SP, S/F, F, D
<b>Typar 3341 NW-PP-t</b>	116* (3.4)	NA	0.20 (70)	0.7/3485 (85), FH	NP	0.18 (40)	0.533 (120)/60	NP	NP	NP	NP	NP	NP	NP	NA	NA	SP, ST, F, D, E, P
<b>Typar 3401 NW-PP-t</b>	136* (4.0)	NA	0.21 (70)	0.7/2460 (60), FH	0.99 (225)	0.270 (60)	0.578 (130)/60	3	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	SP, ST, F, D, E, P
<b>Typar 3501 NW-PP-t</b>	170* (5.0)	NA	0.20 (70)	0.5/2050 (50), FH	1.375 (310)	0.270 (60)	0.710 (160)/60	2	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	F, D, SP, ST, E, P
<b>Typar 3601 NW-PP-t</b>	204* (6.0)	NA	0.10 (140)	0.10/615 (15), FH	1.650 (370)	0.400 (90)	1.067 (240)/60	2	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	F, D, SP, ST, E, R, P
<b>Typar 3801 NW-PP-t</b>	272* (8.0)	NA	0.09 (170)	0.10/328 (8), FH	2.285 (510)	0.425 (95)	1.335 (300)/60	1	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	E, SP, ST, R, P
<b>Typar 3100 NW-PP-t</b>	339* (10.0)	NA	0.074 (200)	0.123/328 (8) FH	3.136 (697)	0.556 (125)	2.000 (450)/60	1	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	E, SP, ST, R, P
<b>Terram T900 NW-PP/PE-t</b>	NP	NA	0.206 (70)	2.1/6300 (154), FH	1.35 (304)	0.275 (62)	0.6 (135)/60	3	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	SP, ST, F, D, E, P
<b>Terram T1000 NW-PP/PE-t</b>	NP	NA	0.208 (70)	2.0/6000 (146), FH	1.5 (337)	0.3 (67)	0.66 (148)/60	2	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	F, D, SP, ST, E, R, P
<b>Terram T1300 NW-PP/PE-t</b>	NP	NA	0.148 (100)	1.6/4800 (117), FH	2 (450)	0.41 (92)	0.9 (202)/60	2	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	E, SP, ST, R, P
<b>Terram T1500 NW-PP/PE-t</b>	NP	NA	0.143 (100)	1.5/4500 (110), FH	2.25 (506)	0.47 (106)	0.97 (218)/60	1	SP, ST, D, E	NP	NP	NP	NP	NP	NA	NA	E, SP, ST, R, P

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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications									Reinforcement Applications						Other Manufacturer's Suggested Applications [8]
	Filtration/Hydraulic Properties				Physical Properties					Wide Width Tensile/Elongation ASTM D 4595 kN/m (lb/in)/%				Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)	LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)	
	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]				
										MD	XD	MD	XD			
<b>SF 40</b>	NA	NA	0.25 (60)	0.84	NR	0.289 (65)	0.650 (145) /50	3*	D	NA	NA	NA	NA	NA	NA	NA
<b>US 200</b>	NA	NA	0.425 (40)	0.05	3.115 (700)	0.334 (75)	0.889 (200) /15	3	NP	NA	NA	NA	NA	NA	NA	NA
<b>US 315</b>	NA	NA	0.425 (40)	0.05	4.005 (900)	0.534 (120)	1.402 (315) /15	1	SP	NA	NA	NA	NA	NA	NA	NA
<b>US 4800</b>	NA	NA	0.595 (30)	0.15	5.563 (1250)	0.801 (180)	2.225 (500) /15	NA	SP	NA	NA	NA	NA	NA	NA	NA
<b>US 670</b>	NA	4.0	0.21 (70)	0.28	4.228 (950)	0.445 x 0.267 (100 x 60)	1.647 x 1.113 (370 x 250) /15 x 15	2, 3	DE	NA	NA	NA	NA	NA	NA	NA
<b>US 90NW</b>	118.65 (3.5)	NA	0.297 (50)	2.0	1.113 (250)	0.178 (40)	0.401 (90) /50	NA	NP	NA	NA	NA	NA	NA	NA	NA
<b>US 120NW</b>	152.55 (4.5)	NA	0.21 (70)	1.7	1.513 (340)	0.223 (50)	0.534 (120) /50	3	S/F	NA	NA	NA	NA	NA	NA	NA
<b>US 160NW</b>	203.4 (6.0)	NA	0.21 (70)	1.5	1.825 (410)	0.267 (60)	0.711 (160) /50	2	SP, D	NA	NA	NA	NA	NA	NA	NA
<b>US 180NW</b>	237.3 (7.0)	NA	0.21 (70)	1.4	2.114 (475)	0.334 (75)	0.801 (180) /50	NA	SP, D	NA	NA	NA	NA	NA	NA	NA
<b>US 205NW</b>	271 (8.0)	NA	0.177 (80)	1.4	2.381 (535)	0.378 (85)	0.912 (205) /50	1	SP, D, ST, E	NA	NA	NA	NA	NA	NA	NA

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Product Name (Structure [1]/ Polymer Type [2])	M288 Transportation-Related Applications										Reinforcement Applications				Other Manufacturer's Suggested Applications [8]	
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	Mass Per Unit Area ASTM D 5261 g/m <sup>2</sup> (oz/yd <sup>2</sup> )	Percent Open Area CWO-22125 %	Apparent Opening Size ASTM D 4751 mm (U.S. sieve)	Permittivity ASTM D 4491 sec-1 Flow Rate (FH or CH) [3] l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	Puncture ASTM D 6241 kN (lb)	Trapezoid Tearing Strength ASTM D 4533 kN (lb)	Grab Tensile/Elongation ASTM D 4632 kN (lb)/%	M288 Survivability Class	M288 Applications [4]	Strength @ 5% Strain [5]		Ultimate Strength % (Tult) [5]		Creep Limited Strength-MD ASTM D 5262 [6] kN/m (lb/ft)		LTDS GRI GT7-MD (in sand) [7] kN/m (lb/ft)
										MD	XD	MD	XD			

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WINFAB 270HP	NA	NA	0.60 (30)	0.70/2037 (50), CH	5.12 (1150)	.578 x .445 (130 x 100)	1.33 x 1.11 (300 x 250)	2,3	SP	21.9 (125)	21 (120)	41.6 (237.5)	36.5 (208.3)	NA	NA	E, D, F, R, ST
WINFAB 2x2HF	NA	NA	0.425 (40)	0.70/2037 (50), CH	6.23 (1400)	0.556 x 0.556 (125 x 125)	1.424 x 1.424	1, 2, 3	D,E,SP,ST	16 (91.7)	24.8 (142)	39.4 (225)	40.9 (233.3)	NA	NA	F, R
WINFAB 370HP	NA	NA	0.60 (30)	0.52/1630 (40), CH	NA	NA	NA	1, 2, 3	SP	21.9 (125)	22.8 (130)	52.5 (300)	48.2 (275)	NA	NA	E, D, F, R, ST
WINFAB 3x3HF	NA	NA	0.60 (30)	0.52/1630 (40), CH	7.12 (1600)	0.801 x 0.623 (180 x 140)	2.003 x 1.558 (450 x 350) 15 x 6	1, 2, 3	SP	20.3 (116)	25.4 (145)	52.5 (300)	52.5 (300)	NA	NA	E, D, F, R, ST
WINFAB 570HP	NA	NA	0.60 (30)	0.5/1222 (30), CH	9.79 (2200)	0.80 x 0.80 (180 x 180)	2.114 x 1.958 (475 x 440) 12 x 12	1, 2, 3	SP	35 (200)	43.8 (250)	70 (400)	70 (400)	NA	NA	E, D, F, R, ST
WINFAB 4x4	NA	NA	0.60 (30)	0.15/407.4 (10), CH	9.79 (2200)	0.89 x 0.89 (200 x 200)	2.558 x 2.225 (575 x 500) 15 x 12	1, 2, 3	SP	21.2 (121)	38 (217)	70 (400)	70 (400)	NA	NA	E,D,F,R,ST
WINFAB 4x6	NA	NA	0.425 (40)	0.26/815 (20), CH	13.34 (3000)	0.801 x 1.224 (180 x 275)	2.67 x 3.115 (600 x 700) 15 x 15	1, 2, 3	D, E, SP, ST	33.6 (191.7)	58.36 (333.3)	84.62 (483.3)	116.72 (666.7)	NA	NA	F, R
WINFAB 6x6	NA	NA	0.60 (30)	0.23/611 (15), CH	NA	NA	NA	1, 2, 3	SP	43.8 (250)	58.4 (333.3)	105.1 (600)	105.1 (600)	NA	NA	E, D, F, R, ST
WINFAB 6x9	NA	NA	0.60 (30)	0.26/815 (20), CH	NA	NA	NA	1, 2, 3	SP	21.9 (125)	78.8 (450)	105.04 (600)	157.57 (900)			
WINFAB 770HP	NA	NA	0.60 (30)	0.23/611 (15), CH	NA	NA	NA	1, 2, 3	SP	52.5 (300)	52.5 (300)	138.6 (708.3)	87.5 (500)	NA	NA	E, D, F, R, ST
WINFAB 2197	NA	10	0.425 (40)	2.1/5907 (145), CH	3.336 (750)	0.512 x 0.334 (115 x 75)	1.624 x 0.89 (365 x 200) 24 x 15	3	D	NA	NA	35 (200)	24.52 (140)	NA	NA	D, E, F
WINFAB 2199	NA	4	0.212 (70)	0.28/733 (18), CH	4.228 (950)	0.445 x 0.445 (100 x 100)	1.779 x 1.3345 (400 x 300) 15 x 15	2,3	D,E,SP	NA	NA	39.4 (225)	33.56 (191.7)	NA	NA	F
WINFAB 2300	NA	8	0.60 (30)	1.5/4685 (115), CH	5.563 (1250)	0.645 x 0.556 (145 x 125)	1.78 x 1.491 (400 x 335) 20 x 15	1, 2, 3	SP	NA	NA	40.3 (230)	39.4 (225)	NA	NA	D, E, F
WINFAB 2404	NA	1	0.425 (40)	0.96/2852 (70), CH	5.118 (1150)	0.668 x 0.734 (150 x 165)	1.78 x 1.402 (400 x 315) 15 x 15	1, 2, 3	D, E, SP, ST	NA	NA	43.8 (250)	40.3 (230)	NA	NA	F
WINFAB 200W	NA	NA	0.425 (40)	0.05/204 (5), FH	3.113 (700)	0.33 x 0.33 (75 x 75)	0.89 x 0.89 (200 x 200) 15 x 15	3	SP	NA	NA	NA	NA	NA	NA	ST

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										MD	XD	MD	XD				
<b>WINFAB 250W</b>	NA	NA	0.425 (40)	0.05/163 (4), FH	3.338 (750)	0.4 x 0.4 (90 x 90)	1.113 x 1.113 (250 x 250) 15 x 15	2, 3	SP	NA	NA	NA	NA	NA	NA	ST	
<b>WINFAB 315W</b>	NA	NA	0.425 (40)	0.08/244 (6), FH	4.005 (900)	0.503 x 0.503 (113 x 113)	1.402 x 1.402 (315 x 315) 15 x 15	1, 2, 3	SP, ST	NA	NA	NA	NA	NA	NA	R	
<b>WINFAB 310N</b>	NA	NA	0.30 (50)	2.2/6112 (150), CH	0.778 (175)	0.111 x 0.111 (25 x 25)	0.355 x 0.355 (80 x 80) 50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	D, E, F	
<b>WINFAB 350N</b>	NA	NA	0.3 (50)	2.0/6112 (150), CH	1.157 (260)	0.178 x 0.178 (40 x 40)	0.401 x 0.401 (90 x 90) 50 x 50	NA	NA	NA	NA	NA	NA	NA	NA	D, E, F	
<b>WINFAB 450N</b>	NA	NA	0.212 (70)	1.7/4889 (120), CH	1.49 (335)	0.222 x 0.222 (50 x 50)	0.534 x 0.534 (120 x 120) 50 x 50	3	D, SP, ST	NA	NA	NA	NA	NA	NA	E, F	
<b>WINFAB 600N</b>	NA	NA	0.212 (70)	1.4/4276 (105), CH	1.825 (410)	0.267 x 0.267 (60 x 60)	0.711 x 0.711 (160 x 160) 50 x 50	2, 3	D, SP, ST	NA	NA	NA	NA	NA	NA	E, F	
<b>WINFAB 800N</b>	NA	NA	0.18 (80)	1.3/3667 (90), CH	2.336 (525)	0.356 x 0.356 (80 x 80)	0.912 x 0.912 (205 x 205) 50 x 50	1, 2, 3	D, E, SP, ST	NA	NA	NA	NA	NA	NA	F	

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