

## Product Data Sheet HydroTurf® CS w/50 mil Super Gripnet®

STRUCTURED GEOMEMBRANE COMPONENT	Test Method	HDPE Values
Thickness (nominal), mil (mm)	ASTM D5994	50 (1.25)
Thickness (min. avg.), mil (mm)	ASTM D5994	47.5 (1.19)
Thickness (lowest indiv.), mil (mm)	ASTM D5994	42.5 (1.06)
Drainage Stud Height (min. avg.), mil (mm)	ASTM D7466	130 (3.30)
Friction Spike Height (min. avg.), mil (mm)	ASTM D7466	175 (4.45)
Density, g/cc	ASTM D792, Method B	0.94 (min.)
Tensile Properties (avg. both directions)	ASTM D6693, Type IV	
Strength @Yield (min. avg.), lb/in. width (N/mm)	ASTM D6693, Type IV	110 (19.3)
Elongation @ Yield (min. avg.), % (GL=1.3 in.)	ASTM D6693, Type IV	13
Strength@Break (min. avg.), lb./in. width (N/mm)	ASTM D6693, Type IV	110 (19.3)
Elongation@Break (min. avg.), lbs. %(GL=2.0 in.)	ASTM D6693, Type IV	200
Tear Resistance (min. avg.), lbs. (N)	ASTM D1004	38 (169)
Puncture Resistance (min. avg.) lbs. (N)	ASTM D4833	80 (356)
Carbon Black Content (range %)	ASTM D 4218	2-3
Carbon Black Dispersion (Category)	ASTM D5596	Only near spherical agglomerates for 10 views in Cat. 1 or 2
Stress Crack Resistance (Single Point NCTL), hours	ASTM D5397, Appendix	500
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm	≥140

Agri America's geomembranes are certified to pass Low Temp. Brittleness via. ASTM D746 (-80°C), and Dimensional Stability via. ASTM D1204 (± 2% @ 100°C)

ENGINEERED TURF COMPONENT	Test Method	Turf Type 1	Turf Type 2
Yarn	ASTM D1577	Polyethylene Fibrillated Tape	Polyethylene Monofilament
Tensile Strength of Yarn	ASTM D2256	15 lbs. min.	25 lbs. min.
Tufted Pile Height	ASTM D5823	1.25 ± 0.25 Inches	2.25 ± 0.25 Inches
Pile Weight	ASTM D5848	19 ± 2 oz. yd <sup>2</sup>	34 ± 2 oz. yd <sup>2</sup>
CBR Puncture	ASTM D6241	800 lb. (MARV)	800 lb. (MARV)
Tensile Product (MD/XD)	ASTM D4595	1,000 lb./ft. min. (MARV)	1,000 lb./ft. min. (MARV)
Aerodynamic Evaluation	GTRI Wind Tunnel	120 mph with max. uplift of 0.12 lb/sf	120 mph with max. uplift of 0.12 lb/sf
Engineered Turf Fiber UV Stability	ASTM G147	>60% retained tensile strength at 100 yrs. (projected)	>60% retained tensile strength at 100 yrs. (projected)
Transmissivity w/underlying Structured Geomembrane at Normal Stress 50psf and 0.33 Gradient (m <sup>2</sup> /sec)	ASTM D4716	2.5x10 <sup>-3</sup> m <sup>2</sup> /sec. (min.)	2.5x10 <sup>-3</sup> m <sup>2</sup> /sec. (min.)
Steady State Hydraulic Overtopping	ASTM D7277/D7276	40 ft/s velocity	40 ft/s velocity
Manning's 'n' Value	ASTM D7277/D7276	0.017 to 0.020	0.018 to 0.025
Steady State Hydraulic Jump Test	Colorado State University Wave Simulator	Dissipates 30 horsepower per ft (min.)	Dissipates 30 horsepower per ft (min.)
Full Scale Wave Overtopping Test Cumulative Volume	Colorado State University Wave Simulator	165,000 ft <sup>3</sup> /ft	165,000 ft <sup>3</sup> /ft
Full Scale Wave Overtopping Test Discharge	Colorado State University Wave Simulator	4.0 ft <sup>3</sup> /s/ft	4.0 ft <sup>3</sup> /s/ft
Internal Friction of Combined Components (Low Confining Stress)	ASTM D5321	33°, min. (peak)	33°, min. (peak)
HydroBinder® Infill Mix	ASTM C387/ASTM C109	3/4 inch Thick Infill 5000psi (min. at 28 days)	3/4 inch Thick Infill 5000psi (min. at 28 days)

### SUPPLY INFORMATION (Standard Roll Dimensions)

	Thickness		Width		Length		Area (approx.)		Weight (avg.)	
	mil	mm	ft.	m	ft.	m	ft <sup>2</sup>	m <sup>2</sup>	lbs	kg
Super Gripnet®	50	1.25	23	7	300	91.4	6,900	640	~3000	~1360
Turf Type 1 Component	N/A	N/A	15	4.6	300	91.4	4,500	418	~840	~380
Turf Type 2 Component	N/A	N/A	12	3.6	300	91.4	3,600	335	~1000	~454

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