PERFORMANCE SPECIFICATION

P300

The P300 permanent turf reinforcement mat shall be a machine-produced mat of 100% UV stable polypropylene fiber.

The matting shall be of consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread.

Slope Design Data

	Slope Gradient (S)		
Slope Length (L)	**≤ 3:1**	**3:1-2:1**	**≥ 2:1**
≤ 20 ft (6 m)	**0.001**	**0.029**	**0.082**
20 – 50 ft	**0.036**	**0.06**	**0.096**
≥ 50 ft (15.2 m)	**0.07**	**0.09**	**0.11**

Channel Design Data

Roughness Coefficients	
Flow Depth	Manning's 'n'
≤ 0.50 ft (0.15 m)	**0.034**
0.50 – 2.00 ft	**0.034-0.020**
≥ 2.00 ft (0.60 m)	**0.020**

Values are approximate, precise values obtained from ECMDS™

Maximum Permissible Shear Stress*		
	Short Duration	Long Duration
Phase 1 UNVEGETATED	**3.0 lbs/ft² (144 Pa)**	**2.0 lbs/ft² (96 Pa)**
Phase 2 PARTIALLY VEGETATED	**8.0 lbs/ft² (383 Pa)**	**8.0 lbs/ft² (383 Pa)**
Phase 3 FULLY VEGETATED	**8.0 lbs/ft² (383 Pa)**	**8.0 lbs/ft² (383 Pa)**

Approximate Maximum Flow Velocity

Unvegetated = 9 ft/s (2.7 m/s)
Vegetated = 16 ft/s (4.9 m/s)

*Performance values obtained through third party testing at the Texas Transportation Institute, Colorado State University, and Utah State University based on soil loss failure criteria not exceeding 0.50 inches (1.27 cm).