



PERFORMANCE SPECIFICATION

SC250



The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 70% straw/30% coconut fiber matrix incorporated into a permanent three-dimensional turf reinforcement matting.

The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between heavy duty UV stabilized top and bottom nets with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings and an ultra heavy duty UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread to form a permanent three-dimensional turf reinforcement matting.

Slope Design - Unvegetated Cover Factors

| Slope Length (L) | Slope Gradient (S) | | |
|------------------|--------------------|---------------|---------------|
| | ≤ 3:1 | 3:1-2:1 | ≥ 2:1 |
| ≤ 20 ft (6 m) | 0.0010 | 0.0209 | 0.0507 |
| 20 - 50 ft | 0.0081 | 0.0266 | 0.0574 |
| ≥ 50 ft (15.2 m) | 0.0455 | 0.0555 | 0.081 |

Channel Design Data

| Roughness Coefficients - Unvegetated | |
|--------------------------------------|--------------------|
| Flow Depth | Manning's 'n' |
| ≤ 0.50 ft (0.15 m) | 0.040 |
| 0.50 - 2.00 ft | 0.040-0.012 |
| ≥ 2.00 ft (0.60 m) | 0.011 |

| Maximum Permissible Shear Stress* | | |
|-----------------------------------|---|--|
| | Short Duration | Long Duration |
| Phase 1 UNVEGETATED | 3.0 lbs/ft² (144 Pa) | 2.5 lbs/ft² (120 Pa) |
| Phase 2 PARTIALLY VEGETATED | 8.0 lbs/ft² (384 Pa) | 8.0 lbs/ft² (384 Pa) |
| Phase 3 FULLY VEGETATED | 10.0 lbs/ft² (480 Pa) | 8.0 lbs/ft² (384 Pa) |

Approximate Permissible Flow Velocity

Unvegetated = 9.5 ft/s (2.9 m/s)
Vegetated = 15 ft/s (4.6 m/s)

Values are approximate, precise values obtained from ECMDS™

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