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Geoweb - Cellular Confinement

Geoweb is used to solve complicated and extreme erosion control and slope issues. Geoweb is a permanent solution to an array of problems.

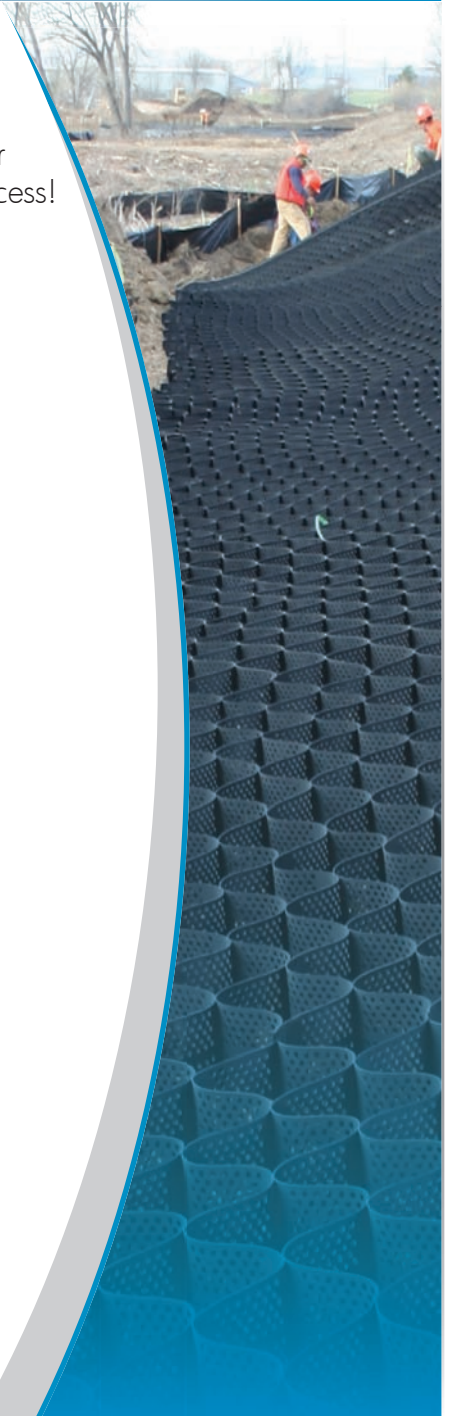
We can supply you with materials or facilitate a full installation with one of our certified installation crews. We want to work with you to make your job a success! Colorado Lining offers design, specification, and detail support. We also offer autocad details and layouts.

Product Features:

- Engineering Backup & Design Review
- Variety of Lengths & Cell Depths, & Cell Sizes
- Perforated & Non-Perforated Cell Walls
- High Strength
- Anchor System & Tendons

Uses & Applications:

- Dam Faces
- Slope Stabilization
- Wildlife Escape Ramps
- Soil Stabilization
- Access Roads
- Porous Pavement
- Parking Lots
- Cart Paths
- Liner Protection



- *Project Photo: Colorado Golf Club in Parker, CO*
- *Slope Stabilization*
- *29,192 SF Geoweb*

| | Property | Value | | Test Method | | |
|--|---|--|---|--------------------------------------|---|--|
| Base Material | Material Composition | Polymer – Polyethylene with density of 58.4 – 60.2 lb/ft ³ (0.935 – 0.965 g/cm ³) | | ASTM D 1505 | | |
| | Color | Black - from Carbon Black | Tan, Green, Other Colors with no heavy metal content | N/A | | |
| | Stabilizer | Carbon black content 1.5% - 2% by weight | Hindered amine light stabilizer (HALS) 1.0% by weight of carrier | N/A | | |
| | Minimum ESCR | 5000 hr | | ASTM D 1693 | | |
| Strip Properties | Sheet Thickness | 50 mil, -5% +10% (1.27 mm, -5% +10%) | | ASTM D 5199 | | |
| | Surface Treatment | <p>Performance: The polyethylene strips shall be textured and perforated such that the peak friction angle between the surface of the textured / perforated plastic and #40 silica sand at 100% relative density shall be no less than 85% of the peak friction angle of the silica sand in isolation when tested by the direct shear method per ASTM D 5321. The quantity of perforations shall remove 16.7% ± 3.5% of the cell wall area.</p> | <p>Material: The polyethylene strips shall be textured with a multitude of rhomboidal (diamond shape) indentations. The rhomboidal indentations shall have a surface density of 140 – 200 per in² (22 – 31 per cm²). In addition, the strips shall be perforated with horizontal rows of 0.4 in (10 mm) diameter holes. Perforations within each row shall be 0.75 in (19 mm) on-center. Horizontal rows shall be staggered and separated 0.5 in (12 mm) relative to the hole centers. The edge of strip to the nearest edge of perforation shall be 0.3 in (8 mm) minimum and the centerline of the weld to the nearest edge of perforation shall be 0.7 in (18 mm) minimum. A slot with a dimension of 3/8 in x 1 3/8 in (10 mm x 35 mm) is standard in the center of the non-perforated areas and at the center of each weld.</p> | | | |
| Cell & Seam Properties | Cell Details | Cell Depth | Nominal Dimensions ±10% | | Density per yd ² (m ²) | Nominal Area ±1% |
| | | | Length | Width | | |
| | GW20V | 3 in (75 mm) | 8.8 in (224 mm) | 10.2 in (259 mm) | 28.9 (34.6) | 44.8 in ² (289 cm ²) |
| | GW30V | 4 in (100 mm) | 287 mm (11.3 in) | 320 mm (12.6 in) | 18.2 (21.7) | 71.3 in ² (460 cm ²) |
| | GW40V | 6 in (150 mm) | 475 mm (18.7 in) | 508 mm (20.0 in) | 6.9 (8.3) | 187.0 in ² (1,206 cm ²) |
| | Short-term Seam Peel Strength | Cell Depth | | Average Certified Cell Seam Strength | | |
| | | 3 in (75 mm) | | 240 lbf (1060 N) | | |
| | | 4 in (100 mm) | | 320 lbf (1420 N) | | |
| | | 6 in (150 mm) | | 480 lbf (2130 N) | | |
| | 8 in (200 mm) | | 640 lbf (2840 N) | | | |
| Long-term Seam Peel Strength | Long-term seam peel strength test shall be performed on all resin or pre-manufactured sheet or strips. A 4.0 in (100 mm) wide seam sample shall support a 160 lb (72.5 kg) load for a period of 168 hours (7 days) minimum in a temperature-controlled environment undergoing a temperature change on a 1-hour cycle from ambient room to 130°F (54°C). Ambient room temperature is per ASTM E 41 | | | | | |
| 10,000-hour Seam Peel Strength Certification | Presto shall provide data showing that the high-density polyethylene resin used to produce the Geoweb sections has been tested using an appropriate number of seam samples and varying loads to generate data indicating that the seam peel strength shall survive a loading of at least 209 lbf (95 kg) for a minimum of 10,000 hours. | | | | | |
| Section Properties | Section Dimension | Section Width | Section Length Range (Cells Long: 18, 21, 25, 29, 34) | | | |
| | | Variable | Minimum | Maximum | | |
| | GW20V | 7.7 ft (2.3 m) to 9.2 ft (2.8 m) | 12.0 ft (3.7 m) | 27.3 ft (8.3 m) | | |
| | GW30V | | 15.4 ft (4.7 m) | 35.1 ft (10.7 m) | | |
| GW40V | 25.4 ft (7.7 m) | | 58.2 ft (17.8 m) | | | |