

Geoweb® Cellular Confinement System		PERMANENT PROTECTION OF EARTH-FILL SLOPES		
		Recommended Material Types	Applications, Functions, Benefits and Design Considerations	
The Geoweb® Section	Section Length	Six Available	Custom sections minimize field construction joints and installation effort.	
	Cell Size	Mid (GW30V), Small (GW20V) or Large (GW40V)	Cell size is governed by slope geometry and design cover thickness. The GW30V cell is applicable for most conditions, the GW20V cell is applicable for very severe conditions, and the GW40V cell is applicable for mild conditions.	
	Cell Depth	75, 100, 150, 200 mm (3, 4, 6, 8 in)	Depth is a function of slope geometry.	
	Cell Type	Textured Perforated or Textured Non-perforated	Maximized interaction between infill and cellular structure. Perforated cells provide in-plane drainage and inter-cell root development where necessary.	
	Cell Color	Black or custom colors	Material is primarily buried – standard or HALS UV stabilization is incorporated	
The Infill	Topsoil & Vegetation	Local soils and vegetation	Structural restraint of topsoil cover on steep slopes. Cellular system confines and protects the root zone when subjected to concentrated hydraulic flow. The development of rills and gullies is prevented. The cellular structure enhances moisture retention and vegetative development in arid climates.	
	Aggregate	Gravels and uniform processed rock	Loose infills can be supported at slope angles greater than their normal angle of repose. Resistance to concentrated surface flows is increased.	
	Concrete	Ready-mix	The Geoweb system functions as a flexible formwork and anchorage system. The hard protective cover is flexible, free-draining, and can be rapidly installed or precast in panels.	
Other Components	Geosynthetics	Geotextiles	Non-woven	Light-weight non-woven underlayer acts as a drainage medium, soil filter and root-anchorage element.
		Geogrids	Generally N. A.	
		Geomembranes	Polymeric or GCL's	Can be employed selectively as infiltration control elements.
		Erosion Control Blankets	Temporary bio-degradable protection	Protection of topsoil and seed immediately following installation.

ALCOA GEOSYSTEMS

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	Tendons		PET, PP and PE	Polymer type and design tensile strength depends on geometry, anchorage design and chemical environment.
	The ATRA® Clip	ATRA® Clip restraint pin		Provides positive transfer of sliding loads to the tendon system.
		ATRA® Anchors		Provides positive shear connection and uplift resistance for a range of anchorage systems.
	Anchor Systems		Steel, galvanized, wood and synthetic anchors	Anchor type depends on geometry, environment, and infill type. Project-specific assessment is recommended.
	Surface Treatments		Various	Application specific including: cement grouts, polymeric, asphaltic etc.
Geoweb® Cellular Confinement System			VEGETATION OF GEOMEMBRANE COVERED SLOPES	
			Recommended Material Types	Applications, Functions, Benefits and Design Considerations
The Geoweb® Section	Section Length		Six Available	Custom sections minimize field construction joints and installation effort.
	Cell Size		Mid (GW30V) or Large (GW40V)	Cell size is governed by slope geometry and design cover thickness.
	Cell Depth		75, 100, 150, 200 mm (3, 4, 6, 8 in)	Depth is a function of slope geometry.
	Cell Type		Textured Perforated or Textured Non-perforated	Maximized interaction between infill and cellular structure. Perforated cells provide in-plane drainage and inter-cell root development where necessary.
	Cell Color		Black or custom colors	Material is primarily buried – standard or HALS UV stabilization is incorporated.
The Infill	Topsoil & Vegetation		Local soils and vegetation	Structural restraint of topsoil cover on steep slopes. Cellular system confines and protects the root zone when subjected to concentrated hydraulic flow. The development of rills and gullies is prevented. The cellular structure enhances moisture retention and vegetative development in arid climates.
	Aggregate		Gravels and uniform processed rock	Loose infills can be supported at slope angles greater than their normal angle of repose. Resistance to concentrated surface flows is increased.
	Concrete		Ready-mix	The Geoweb system functions as a flexible formwork and anchorage system. The hard protective cover is flexible, free-draining, and can be rapidly installed or precast in panels.
Other Components	Geosynthetics	Geotextiles	Non-woven	Light-weight non-woven underlayer acts as a drainage medium, soil filter and root-anchorage element.
		Geogrids	Generally N. A.	

	Geomembranes	Polymeric or GCL's	Primary system underlayer.
	Erosion Control Blankets	Temporary bio-degradable protection	Protection of topsoil and seed immediately following installation.
	Tendons	PET, PP and PE	Polymer type and design tensile strength depends on geometry, anchorage design and chemical environment. Long-term creep performance is important.
	The ATRA® Clip	ATRA® Clip restraint pin	Provides positive transfer of sliding loads to the tendon system.
		ATRA® Anchors	Provides positive shear connection between Geoweb sections and tendon anchors.
	Anchor Systems	Non-degradable	Anchor type depends on geometry, environment, and infill type. Dead-man crest anchors are generally required.
Surface Treatments	Various	Application specific including: cement grouts, polymeric, asphaltic etc.	
Geoweb® Cellular Confinement System		VEGETATION OF ROCK AND CONCRETE SLOPES	
		Recommended Material Types	Applications, Functions, Benefits and Design Considerations
The Geoweb® Section	Section Length	Six Available	Custom sections minimize field construction joints and installation effort.
	Cell Size	Mid (GW30V) or Small (GW20V)	Cell size is governed by slope geometry and design cover thickness.
	Cell Depth	75, 100, 150, 200 mm (3, 4, 6, 8 in)	Depth is a function of slope geometry.
	Cell Type	Textured Perforated or Textured Non-perforated	Maximized interaction between infill and cellular structure. Perforated cells provide in-plane drainage and inter-cell root development where necessary.
	Cell Color	Black or custom colors	Material is primarily buried – standard or HALS UV stabilization is incorporated.
The Infill	Topsoil & Vegetation	Local soils and vegetation	Structural restraint of topsoil cover on steep slopes. Cellular system confines and protects the root zone when subjected to concentrated hydraulic flow. The development of rills and gullies is prevented. The cellular structure enhances moisture retention and vegetative development in arid climates.
	Aggregate, Concrete	N. A.	



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GEOWEB® SLOPE PROTECTION SYSTEM SYSTEM COMPONENTS GUIDELINE

Other Components	Geosynthetics	Geotextiles	Non-woven	Light-weight non-woven underlayer acts as a drainage medium, filter and root-anchorage element.	
		Geogrids	Generally N. A.		
		Geomembranes	N. A.		
		Erosion Control Blankets	Temporary bio-degradable protection	Protection of topsoil and seed immediately following installation.	
	Tendons		PET, PP and PE	Polymer type and design tensile strength depends on geometry, anchorage design and chemical environment.	
	The ATRA® Clip		ATRA® Clip restraint pin	Provides positive transfer of sliding loads to the tendon system.	
			ATRA® Anchors	Provides positive shear connection and uplift resistance for a range of anchorage systems.	
	Anchor Systems		Steel, galvanized, and synthetic anchors	Anchor type depends on geometry, environment, and infill type. Project-specific assessment is recommended.	
Surface Treatments		Various	Application specific including: sprayed seed emulsion coatings.		

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