

Evaluation Table:

PEP ID:	
Manufacturer:	
Product Name:	

1014 – Geosynthetics:

1014-6 Geocomposite Wall Drain System

ADOT Standard Specification Sections: 1014-1, 1014-6, & 1014-9: ASTM D1777, ASTM D1621, ASTM D4716, ASTM D4632, ASTM D4533, ASTM D6241, ASTM D4355, ASTM D4491, & ASTM D4751

ADOT Drawings:

Responsible Section: Materials Group

Product Property	Specification/ Test Method	Requirement	Results	Pass/ Fail
General Requirements:	1014-1	Fibers, yarns, and filaments used in the manufacture of geotextile fabric, and the threads used in joining by sewing, shall consist of long-chain synthetic polymers, composed at least 95 percent, by weight, of polyolefins or polyesters. They shall be formed into a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages.		
General Requirements:	1014-1	Geosynthetic materials shall be furnished in protective covers capable of protecting the materials from harmful environmental conditions such as ultraviolet rays, abrasion, extreme heat, and water.		
General Requirements:	1014-1	Geotextile fabric shall be resistant to chemical attack, rot, and mildew, and shall have no tears or defects which will adversely alter its physical properties.		

Product Property	Specification/ Test Method	Requirement	Results	Pass/ Fail
Geocomposite Wall Drain System:	1014-6	The geocomposite wall drain system shall be of composite construction, consisting of a supporting structure of drainage core material and a geotextile filter fabric permanently bonded to the core material on one side only. The geocomposite shall be resistant to commonly encountered chemicals and hydrocarbons, and resistant to ultraviolet exposure.		
Geocomposite Wall Drain Core:	1014-6.01	The geocomposite wall drain core material shall consist of a preformed, stable, polymer plastic material with a cusped, nipped, or geonet structure.		
Geocomposite Wall Drain Core:	1014-6.01	The drainage core shall provide support for and shall be bonded to the geotextile filter fabric at intervals not exceeding 1-1/8 inches in any direction. Its preformed structure shall be perforated to allow water to flow freely to the weep hole drainage outlets.		
Geocomposite Wall Drain Core:	1014-6.01	The core shall have at least 14 square inches per square foot of flat area in contact with the geotextile fabric to support the fabric.		
Geocomposite Wall Drain Core:	1014-6.01	The core material shall conform to the following physical requirements:		
Thickness with Fabric	ASTM D1777	0.23 inches min.		
Compressive Strength	ASTM D1621	6,000 psf min.		
Transmissivity; Gradient = 1.0, Normal Stress = 5,000 psf	ASTM D4716	4.0 gpm/ft min.		
Geocomposite Wall Drain Fabric:	1014-6.02	The geocomposite wall drain fabric shall be laminated onto or adhere to the side of the drainage core which will face the backfill.		

Product Property	Specification/ Test Method	Requirement	Results	Pass/ Fail
Geocomposite Wall Drain Fabric:	1014-6.02	A minimum 3-inch wide flap of fabric shall extend beyond both longitudinal edges of the geocomposite core. The fabric shall cover the full length of the core.		
Drainage Fabric	1014-9	Drainage fabric shall meet the following requirements (Non-woven, elongation $\geq 50\%$, as measured in accordance with ASTM D4632):		
Grab Strength	ASTM D4632	157 lbs. min.		
Tear Strength	ASTM D4533	56 lbs. min.		
Puncture Strength	ASTM D6241	309 lbs. min.		
Ultraviolet stability (retained strength)	ASTM D4355	$\geq 50\%$ after 500 hours exposure		
Permittivity	ASTM D4491	0.5 sec ⁻¹		
Apparent opening size	ASTM D4751	No. 70 U.S. Standard sieve size		