

... in diameter and be biodegradable. Nondegradable rope must be made from nylon, polypropylene, or other geosynthetic fiber.

The linear sediment barrier must comply with section 13-10.

13-5.02G Gravel-Filled Bags

A gravel-filled bag must:

Refer to Section 96-1.02F

1. Be a geosynthetic bag
2. Have inside dimensions from 24 to 32 inches long and from 16 to 20 inches wide
3. Have a bound opening sewn with yarn, bound with wire, or secured with a closure device
4. Weigh from 30 to 50 pounds when filled with gravel

Gravel for a gravel-filled bag must be from 3/8 to 3/4 inch in diameter and must be clean and free of clay balls, organic matter, and other deleterious materials.

13-5.02H–13-5.02J Reserved

13-5.03 CONSTRUCTION

13-5.03A General

The Engineer authorizes the areas to receive soil stabilization materials by approving the placement of ...

Caltrans 2018 Standard Specifications
pp. 204-205

UV resistance, retained grab breaking load, 500 hours, (min, percent)	ASTM D4355	70	70
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96-1.02F Gravel-Filled Bag

Gravel-filled bag must comply with the requirements shown in the following table:

Gravel-Filled Bag

Quality characteristic	Test method	Requirement
Grab breaking load, 1-inch grip in each direction, (min, lb)	ASTM D4632	205
Water flow rate, average roll value, (min and max, gal per minute/sq ft)	ASTM D4491	80–150
Permittivity, (min, sec ⁻¹)	ASTM D4491	0.2
Apparent opening size, average roll value, (max, inches)	ASTM D4751	0.016
UV resistance, retained grab breaking load, 500 hours, (min, percent)	ASTM D4355	70

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96-1.02G Sediment Filter Bag

The sediment filter bag must comply with the requirements shown in the following table.

See Spec Sheets on next page.

Sediment Filter Bag

Quality characteristic	Test method	Requirement
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PROPERTY	TEST METHOD	MARV ENGLISH	MARV METRIC
Tensile Strength (Grab)	ASTM D4632	205 x 205 lbs	912 x 912 N
Elongation (Grab)	ASTM D4632	50% x 50%	50% x 50%
Trapezoidal Tear Strength	ASTM D4533	80 x 80 lbs	356 x 356 N
CBR Puncture	ASTM D6241	525 lbs	2,336 N
UV Resistance (500 hrs)	ASTM D4355	70%	70%
Apparent Opening Size*	ASTM D4751	80 US Std. Sieve	0.18 mm **
Permittivity	ASTM D4491	1.3 sec ⁻¹	1.3 sec ⁻¹ *
Water Flow Rate	ASTM D4491	90 gpm/ft ²	3,667 lpm/m ²

* >0.2 MEETS SPEC
** <.4064 mm MEETS SPEC

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D4632	lbs (N)	205 (912)	205 (912)
Grab Tensile Elongation	ASTM D4632	%	50	50
Trapezoid Tear Strength	ASTM D4533	lbs (N)	80 (356)	80 (356)
CBR Puncture Strength	ASTM D6241	lbs (N)	500 (2224)	
			Maximum Opening Size	
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	80 (0.18)**	
			Minimum Roll Value	
Permittivity	ASTM D4491	sec ⁻¹	1.4 *	
Flow Rate	ASTM D4491	gal/min/ft ² (l/min/m ²)	95 (3870)	
			Minimum Test Value	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	70	

* >0.2 MEETS SPEC
** <.4064 mm MEETS SPEC

PROPERTY	TEST METHOD	DATA	
		METRIC	ENGLISH
<input type="checkbox"/> Mechanical			
Grab Tensile Strength	ASTM D 4632	0.91 kN	205 lbs
Grab Tensile Elongation		50%	
Trapezoidal Tear	ASTM D 4533	0.36 kN	80 lbs
CBR Puncture	ASTM D 6241	2.23 kN	500 lbs
<input type="checkbox"/> Endurance			
UV Resistance	ASTM D 4355	70% @ 500 hrs	
<input type="checkbox"/> Hydraulics / Filtration			
Permittivity ⁽¹⁾	ASTM D 4491	1.35 sec ⁻¹ *	
Water Flow Rate ⁽¹⁾		3666 lpm/m ²	90 gpm/ft ²
Apparent Opening Size (AOS) ⁽¹⁾	ASTM D 4751	0.180 mm **	80 US Std. Sieve
<input type="checkbox"/> Physical			
Mass Per Unit Area (Typical)	ASTM D 5261	244.08 g/m ²	7.2 oz/yd ²
Thickness (Typical)	ASTM D 5199	1.52 mm	60 mils

* >0.2 MEETS SPEC
** <.4064 mm MEETS SPEC