

SILT FENCE

What is it?

This is a temporary barrier made of woven wire and fabric filter cloth that is used to catch sediment-laden runoff from small areas of disturbed soil such as following a fire. Silt fences are easy to construct, and materials are available from hardware stores, nurseries, and lumberyards.

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When is it used?

Silt fences are used for specific situations. Major considerations are slope, slope length, and the amount of drainage area from which the fence will catch runoff. Here are some design considerations:

Slope Steepness

2:1 = 50%
3:1 = 33%
4:1 = 25%
5:1 = 20%
<5:1 = <20%

Maximum Slope Length

50 feet
75 feet
125 feet
175 feet
200 feet

*For longer slopes, add additional silt fences.

Drainage Area:

The area that contributes runoff to be caught by the silt fence should not be greater than 1/2 acre for 100 feet of fence.

Type of Runoff:

Silt fences are designed to catch runoff that is in the form of "sheet flow" and not "concentrated flow." Sheet flow differs from concentrated flow in that the runoff is spread evenly over the ground surface (like a sheet) rather than concentrated in small rills or gullies.

Methods and Materials:

Fence Posts:

Posts should be at least 36 inches long. Wood posts should be of hardwood with a minimum cross sectional area of 3 inches. Steel posts should be standard "T" or "U" section and should weigh no less than 1 pound per linear foot.

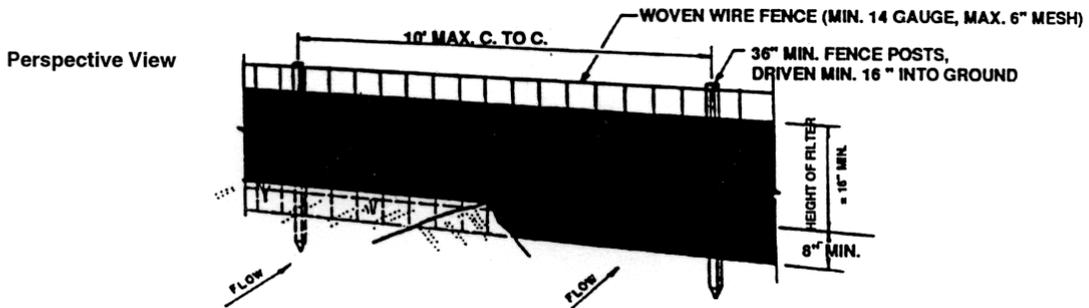
July 2002 Arizona

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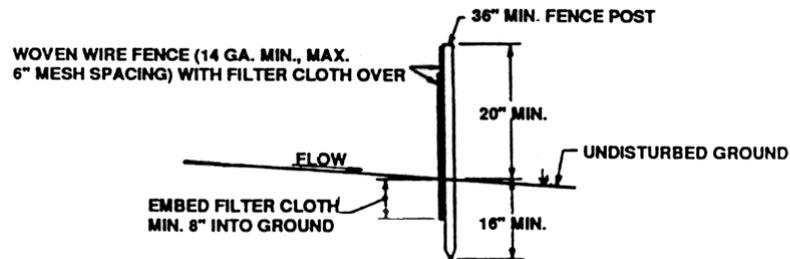
Fabric Properties:

Filter fabric properties should be as follows (hardware store personnel can help you with these):

Fabric Property	Minimum Acceptable Value	Test Method
Grab tensile strength (LBS)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D751 (mod)
Slurry flow Rate (gal./min/sf)	0.3	
Equivalent Opening Size	40-80	US Std Sieve
Ultraviolet Rad. Stability	90	ASTM-G-26



Section View



Construction Notes

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and midsection.
3. When 2 sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
4. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.