



The [Silt Fence](#) is used as temporary barrier for erosion control and prevention during **construction jobs** and in other areas where **soil might be disturbed**. These erosion control fences are typically made from a woven geotextile fabric that is then attached to wooden stakes. These fences can be used in **low-level shallow flow that does not exceed 0.5 cfs**.

Typically Features:

- Geotextile Materials such as Polypropylene, Nylon or Polyester
- Wooden Stakes or Metal Posts
- 6 Month Life Expectancy
- Placed in areas with runoff less than 0.5 cfs

| Typical Silt Fence Packaging Specifications (Other Sizes, Fabrics & Materials Available) | | |
|---|-----------------------|------------------------------|
| Roll Dimensions (W x L) in feet | Square Yards per Roll | Estimated Roll Weight (lbs.) |
| 2/3 x 100/300/750 | 22/66/165/33/100/248 | 8/20/10/30 |





Typical Product Specifications

Fabrics used for the [Silt Fence](#) include **woven geotextiles such as polypropylene, nylon, or polyester**. These fabrics are chosen based on the minimum synthetic fabric requirements listed below:

| Typical Specifications | | | |
|-------------------------------|--------------------|--|-----------------------------------|
| Property | Test Method | Unit | Minimum Average Roll Value |
| Weight (typical) | ASTM D5261 | oz/yd ² (g/m ²) | 3.2 (102) |
| Grab Tensile | ASTM D4632 | lbs. (kN) | 124 (.55) |
| Grad Elongation | ASTM D4632 | % | 15 |
| Trapezoid Tear Strength | ASTM D4533 | lbs. (kN) | 45 (.20) |
| CBR Puncture Resistance | ASTM D6241 | lbs. (kN) | 325 (1.45) |
| Permittivity | ASTM D4491 | sec ⁻¹ | 0.1 |
| Water Flow | ASTM D4491 | gpm/ft ² (l/min/m) | 10 (408) |
| AOS | ASTM D4751 | US Sieve (mm) | 30 (.6) |
| UV Resistance | ASTM D4355 | %/hr. | 70/500 |





Typical Silt Fence Properties

Placed the Silt Fence is Use: Typically this silt control fence is used on construction sites with relatively small drainage areas. Runoff can be a low-level shallow flow, but should not exceed 0.5 cfs.

Drainage Area: This area should not exceed 1/4 acre per 100 ft. of fence length. Slope length above this fence should also not exceed 100 ft. (NAHB, 1995) as this can have a negative impact on performance.

Life Expectancy: The life expectancy of this fence is approximately 6 months, depending on your local conditions. The Burlap Fence is usually only 2 months. Fabric can be reinforced with wire mesh for increased life.

Barrier Placement:

Wooden stakes: If oak is used, these stakes should be at least 5 feet long and have a minimum diameter of 2 inches. Softer woods such as pine should be at least 4 inches in diameter.



Metal Post: When using metal post in place of wooden stakes, they should have a minimum weight of 1.00 to 1.33 lb/linear foot. These metal post require attachment points such as hog rings for fastening the filter fabric using wire ties.





Typical Silt Fence Properties

Height of Fence Post: The height should be between 16 and 34 inches above grade.

If standard strength fabric is used in combination with wire mesh, the posts be spaced no more than 10 feet apart.

If extra-strength fabric is used without wire mesh reinforcement, the support posts should be spaced no more than 6 feet apart which is typical on most D.O.T. projects (VDCR, 1995).

Fence Placement: A [silt fence](#) should be erected to eliminate unwanted gaps in the fence. If a continuous roll of fabric is not available, the fabric should overlap from both directions only at stakes or posts with a minimum overlap of 6". A trench should be excavated to backfill the bottom of the fabric fence at least 6 inches below the ground surface. This minimizes entrainment of stormwater runoff.

The design should be able withstand the runoff from a 10-year peak storm event, and once installed should remain in place until all areas up-slope have been permanently stabilized.





Silt Fence Maintenance & Effectiveness

Maintenance

- The [Silt Fence](#) should be inspected regularly and frequently, as well as after each rain event.
- If gaps or tears are found, they should be repaired or the fabric should be replaced immediately.



Sediment Removal

- Sediment should be removed from the fence when it reaches 1/3 to 1/2 the height of the fence.
- Sediment should be removed more frequently if it is causing a noticeable strain on the fabric.
- When the silt fence is removed, accumulated sediment should also be removed.

Effectiveness

USEPA (1993) reports the following effectiveness for silt fences constructed from filter fabric and properly installed and maintained.

- Average Total Suspended Solids Removal: 70 %
- Sand Removal: 80—90 %
- Silt-Loam Removal: 50—80%
- Silt-Clay-Loam Removal: 0—20%





Contractor Grade Silt Fence

We offer [contractor grade silt construction fences](#) for the following states:

| | | |
|--|-----------------------|-------------------------------|
| ALABAMA (AL) | KANSAS (KS) | NORTHERN MARIANA ISLANDS (MP) |
| ALASKA (AK) | KENTUCKY (KY) | OHIO (OH) |
| AMERICAN SAMOA (AS) | LOUISIANA (LA) | OKLAHOMA (OK) |
| ARIZONA (AZ) | MAIN (ME) | OREGON (OR) |
| ARKANSAS (AR) | MARSHALL ISLANDS (MH) | PALAU (PW) |
| CALIFORNIA (CA) | MARYLAND (MD) | PENNSYLVANIA (PA) |
| COLORADO (CO) | MASSACHUSETTS (MA) | PUERTO RICO (PR) |
| CONNECTICUT (CT) | MICHIGAN (MI) | RHODE ISLAND (RI) |
| DELAWARE (DE) | MINNESOTA (MN) | SOUTH CAROLINA (SC) |
| DISTRICT OF COLUMBIA (DC) | MISSISSIPPI (MS) | SOUTH DAKOTA (SD) |
| FEDERATED STATES of MICRONESIA (FM) | MISSOURI (MO) | TENNESSE (TN) |
| FLORIDA (FL) | MONTANA (MT) | TEXAS (TX) |
| GEORGIA (GA) | NEBRASKA (NE) | UTAH (UT) |
| GUAM (GU) | NEVADA (NV) | VERMONT (VT) |
| HAWAII (HI) | NEW HAMPSHIRE (NH) | VIRGIN ISLANDS (VI) |
| IDAHO (ID) | NEW MEXICO (NM) | VIRGINIA (VA) |
| ILLINOIS (IL) | NEW YORK (NY) | WASHINGTON (WA) |
| INDIANA (IN) | NORTH CAROLINA (NC) | WEST VIRGINIA (WV) |
| IOWA (IA) | NORTH DAKOTA (ND) | WISCONSIN (WI) |

