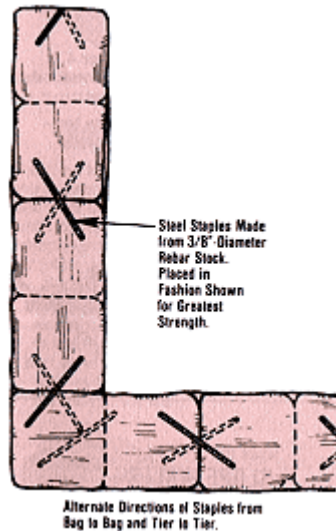


Project

Rip Rap Projects: Dams, Bulkheads, & Erosion Control



QUIKRETE® Rip Rap and Sand Mix are packaged in biodegradable paper bags suitable for rip rapping to save time and labor on heavy-duty projects. They are ideal for constructing headwalls for culverts and other erosion control projects, as well as building dams, beach bulkheads, and waterway walls. They are also especially useful in out-of-the-way locations and eliminate the need for costly construction machinery. A particular advantage in their use is the ability to set in a wide range of conditions, from water immersion to natural moisture alone.

Dams and Bulkheads

A sturdy, long-lasting dam or bulkhead is a relatively quick and simple job with rip rap. Standard QUIKRETE® Rip Rap comes in 80-lb bags. 25 bags will lay a wall 8' long and 2' high. 80 pound Sand Mix can be used instead of Rip Rap.

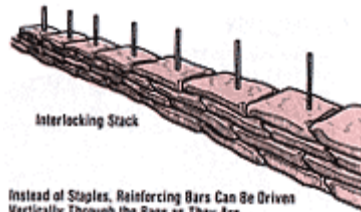
Required Tools & Materials

- QUIKRETE® Rip Rap or Sand Mix
- Steel reinforcing rods (staple or straight)
- Sledgehammer and shovel

Step by Step

Construction

1. Outline the area to be excavated. Remove all grass, roots, and other organic matter. Dig to a depth of 6" and bring the base of this trench to a uniform grade.
2. Lay the first tier of bags for the dam or bulkhead wall by butting the bags together end-to-end. Stack succeeding tiers in an interlocking fashion or bond pattern. Thoroughly sprinkle and tamp each layer of bags. Perforating the bags with a pitchfork or metal rake will speed saturation and initial set.
3. To increase the wall's strength, 3/8" steel rebar staples can be



driven into the bags. Alternate the staple direction from bag to bag and tier to tier.

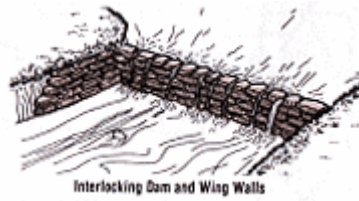
Instead of Staples, Reinforcing Bars Can Be Driven Vertically Through the Bags as They Are Stacked. This Method Will Be Necessary if the Bags Are Stacked Under Water.

4. As an alternate, drive straight rebar rods down through the bags as shown.

5. Depending on the height of the dam wall and the capacity of the reservoir, it may be desirable to leave channels for water to runoff between bags in the top tier.

For Best Results

- The work should be completed with as little interruption as possible to assure integral construction.
- Materials should be kept wet 4 days to assist curing, although natural moisture alone is enough to set.
- Do not use for vertical walls higher than 2'.



SlopeWalls/Erosion Control

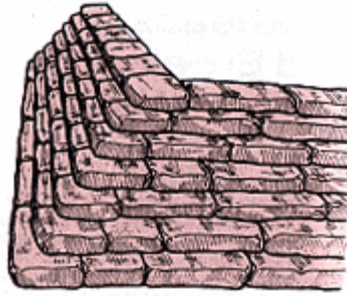
Controlling erosion with rip is almost as easy as playing with children's building blocks. Because it will set from natural moisture alone and comes in easy-to-handle bags, erosion walls can be built from rip rap even in locations inaccessible for other construction methods.

Required Tools & Materials

- QUIKRETE® Rip Rap or Sand Mix
- Steel reinforcing rods
- Sledgehammer
- Shovel
- Rake
- Tamper

Step by Step

Construction



Set Bags in a Running Bond Pattern with the Ends Butted Together and Corners Interlocked.

1. Place first tier of bags into a secure base end-to-end.

2. Set back succeeding rows in a stair-step fashion to full height of slope. It is recommended to arrange rows at a minimum of 45 degrees from the vertical. Set bags in a running bond pattern with the ends butted together and corners interlocked. Anchor the bags to the slope with 3/8" rebar. Perforate and tamp bags as thoroughly as possible.

3. As each tier is laid, backfill with tamped-in-dirt to assure a solid bank.

For Best Results

- Drive steel reinforcing rods through each bag to anchor them to the slope.
- Avoid doing the job when the temperature is at or near freezing
- Complete the job when little interruption as possible to assure integral construction.

