



Installation Guideline: Riprap Applications

3904 Virginia Ave • Cincinnati, Ohio 45227 • Phone (513) 271-6000 • Fax (513) 271-4420

INSTALLATION PROCEDURES

1) GEOTEXTILE PLACEMENT

Place and anchor the geotextile without wrinkles or folds on a smooth graded surface approved by the project engineer. Use key trenches or aprons at the crest and toe of the slope to anchor the ends of the geotextile. 18" anchoring pins may be used to expedite construction. Place the geotextile with the machine direction parallel to the direction of water flow. This is normally parallel to the slope for erosion control runoff and wave action and parallel to the stream or channel for stream bank and channel protection.

2) JOINING ADJACENT SHEETS

Join adjacent geotextile sheets by sewing or overlapping the sheets. Successive sheets of the geotextile can be overlapped upstream over downstream, and/or upslope over down slope in a "shingle effect". Overlap adjacent rolls a minimum of 12" in all instances. Overlapping of roll ends should be a minimum of 12" except when placed under water. Overlaps under water should be a minimum of 3'. In cases where wave action or multidirectional flow is anticipated, all adjoining sheets perpendicular to the direction of flow should be sewn.

3) ARMOR PLACEMENT

Always take care to avoid damaging the geotextile as a result of the installation process. Begin the armor system placement at the toe and proceed up the slope. Avoid stretching and subsequent tearing of the geotextile during armor placement. Do not drop riprap and heavy stone from a height of more than 12". Do not allow stone with a mass of more than 225 lb to roll down the slope. Do not drop smaller sizes of stone from a height exceeding 3', unless it can be demonstrated that the placement procedures will not damage the geotextile. For underwater applications, place the geotextile and backfill material the same day. Field monitoring should be performed to verify that the armor system placement does not damage the geotextile. Backfill all void spaces in the armor stone with small stone to ensure full coverage. After the placement of the armor stone, avoid any grading that results in movement of the stone directly above the geotextile.

4) REPAIR

In lieu of specific project guidelines, overlap the damaged geotextile by a minimum of 36" in all directions with the replacement geotextile.

5) STORAGE

Geotextile rolls will arrive wrapped in a UV protective cover. Additionally, the installer should insure they are adequately protected from moisture. If stored outdoors in extreme weather, the geotextile should be elevated from the ground surface and covered with a tarpaulin or opaque plastic.