**SUBMAR UltraLok™ Interlocking Blocks** are designed for maximum erosion control while promoting vegetative growth. They provide for easy, economical installation in areas prohibitive of heavy equipment due to confined situations or areas that are hard to reach. UltraLok™ blocks are manually installed over a filter fabric which allows for proper drainage and vegetation adding lasting benefits to property. UltraLok™ blocks can be installed in stages as a project progresses or as a budget allows. They are an excellent solution against erosion in light to moderate water flow as well as open channel conditions. UltraLok™ interlocking blocks come in varying heights to accommodate multiple types of erosion problems. The end result will be a synergy of hard-armor strength and performance with nature’s fragile development into a self-mitigating green site. Submar Synergy happens when our products compliment nature.

Each UltraLok block unit gains strength and durability by interlocking with its neighboring units as shown on the opposite page diagram. Over time the UltraLok installation becomes part of the landscape providing the ultimate in erosion control.

**UltraLok™ Applications**
- Bridge Abutment Protection
- Channel Lining
- Ditches
- Lake, Pond and Shoreline Protection
- Outfall Protection
- Residential Spillways
UltraLok™ Interlocking Block Characteristics

- Ideal for vegetation growth
- Environmentally friendly
- Traversable surface
- Time-tested strength
- Installed with minimal equipment and low-skilled labor
- Conforms to ground contours
- National product availability
- All units are uniform requiring no special blocks to complete installation.
- Durable and long-lasting performance
- Positive concrete interlocking connections make edge restraints optional

UltraLok™ Revetment System Specifications

<table>
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<tr>
<th>Unit</th>
<th>Thickness</th>
<th>Coverage Area SF/Unit</th>
<th>Unit Weight LBS</th>
<th>Weight PSF</th>
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<th>Top of Unit</th>
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<tbody>
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*Compressive Strength: 4000 PSI (Minimum)

**Maximum Absorption: 12.0 LBS FT³ (Average of Three Units)
Seven Step Installation Guide

Step 1: Planning
Start with a good level measure and draw a diagram of the area, noting any existing structures such as buildings, fences and other paved areas.

Step 2: Preparing
Contact your local utility companies before you begin excavation. Stake out an area approximately 12” larger than the area to be covered. Plan to slope the blocks away from the buildings in the direction of normal drainage.

Step 3: Excavating
For areas limited to pedestrian traffic, a base of 4”-6” of processed gravel is recommended - excavate 7”- 9” to allow for base material. For vehicular traffic a base of 6”- 8” of processed gravel is recommended - excavate 9”- 11” deep.

Step 4: Installing the Base
After installation of site specific geotextile fabric, compact the surface of the excavated soil then fill the area with 3/4” minus crushed stone or aggregate approximately 5” thick. Compact this with the plate compactor. Continue to add gravel in layers until the base is approximately 3” to 3-1/2” from the desired level of the finished grade. The slope should be 1/8” per foot. Install a level line across the area. On the stake that is at the end you want to slope towards, move the line down 1/8” for every foot. The distance from the line to the base should be equal all along the line.

Step 5: Edge Restraints (Optional)
UltraLoK blocks have a positive interlocking connection which make edge restraints optional.

Step 6: Cutting
Measure and mark the blocks then cut with an abrasive blade or hammer and chisel.

Step 7: Compacting & Setting
Sweep the surface to remove any debris. Spread two inches of top soil and/or crushed stone into the joints. The soil can then be seeded to reinforce the area and create vegetation for an eco-friendly site. You have now completed your project and the end result is an environmentally strong, value-added and visually-pleasing site.