



UltraFlex™

SITE SOLUTIONS



SUBMAR®

Synergy with Nature™

Submar Synergy With Nature™ is the joining of nature's fragile development with the hard-armor strength and performance of articulated concrete mats resulting in a visually-pleasing and environmentally-minded site solution. UltraFlex Articulating Concrete Block Mats are the long-term proven solution to traditional alternatives such as riprap, gabions, structural concrete, grout mats and other durable erosion protection systems. UltraFlex Mats are easy to install, therefore, reduce construction time and costs on your project. Submar Synergy happens when our products compliment nature.



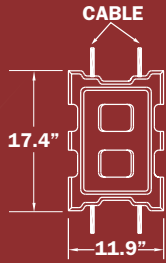
UltraFlex™ Applications

- Bridge Abutments
- Boat Access and Ramps
- Canals, Streams and Bayous
- Channel Lining
- Dams and Spillways
- Drainage Ditches
- Embankments
- Levees and Dikes
- Low-Water Stream Crossings
- Outfall Protection
- Retention Basins
- Riverbank Protection
- Roads (Temp/Haul)
- Scour Protection
- Shorelines
- Slope Protection
- Weirs and Overflow Channels

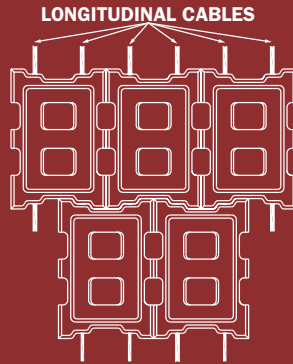
Submar has achieved success in such a wide variety of applications by providing superior product performance, an ability to consistently manufacture product nationwide, outstanding technical support and customer service.



UltraFlex™ M4540



TOP VIEW



PLAN VIEW



END VIEW



SIDE VIEW

UltraFlex™ Revetment System Specifications

Unit		Dimensions			Coverage Area SF/Unit	Unit Weight (LBS)	Weight (PSF)	Open Area %	
Size	Style	L	W	H				Bottom of Unit	Top of Unit
M4540	Open	17.1	11.9	4.5	1.33	42-49	32-37	20	30
M4545	Closed	17.1	11.9	4.5	1.33	53-61	40-46	10	15
M6050	Open	17.1	11.9	6	1.33	61-72	46-54	20	30
M6055	Closed	17.1	11.9	6	1.33	72-83	54-62	10	15
M9070	Open	17.1	11.9	9	1.33	91-108	65-75	20	30
M9085	Closed	17.1	11.9	9	1.33	108-124	78-91	10	15
XL4540	Open	17.4	23.9	4.5	2.67	90-106	34-40	20	30
XL4545	Closed	17.4	23.9	4.5	2.67	108-128	40-48	10	15
XL6050	Open	17.4	23.9	6	2.67	116-134	43-50	20	30
XL6055	Closed	17.4	23.9	6	2.67	139-163	52-61	10	15
XL9070	Open	17.4	23.9	9	2.67	173-201	65-75	20	30
XL9085	Closed	17.4	23.9	9	2.67	209-243	78-91	10	15

UltraFlex™ Tapered Units for Dams, Levees & Spillways

M4050T	Open	17.1	11.9	4.5	1.33	42-49	32-37	20	30
M6050T	Open	17.1	11.9	6	1.33	61-72	46-54	20	30
M9070T	Open	17.1	11.9	9	1.33	91-108	65-75	20	30
XL4540T	Open	17.4	23.9	4.5	2.67	90-106	34-40	20	30
XL6050T	Open	17.4	23.9	6	2.67	116-134	43-50	20	30
XL9070T	Open	17.4	23.9	9	2.67	173-201	65-75	20	30

*Compressive Strength: 4000 PSI (Minimum)

**Maximum Absorption: 12.0 LBS FT³ (Average of Three Units)

UltraFlex™ Characteristics

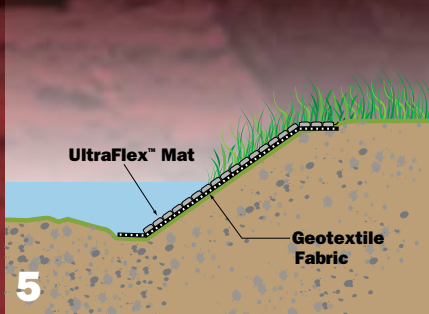
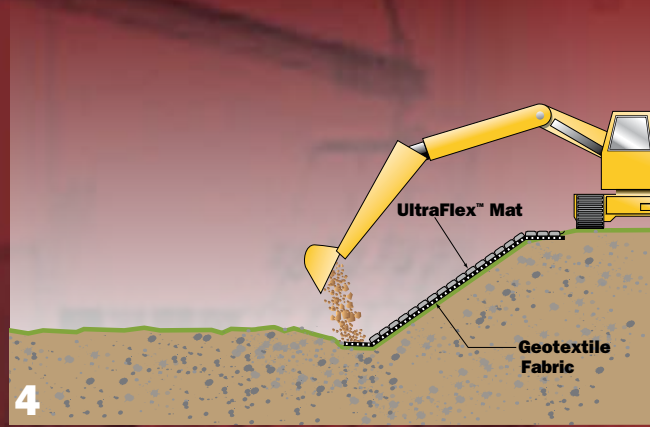
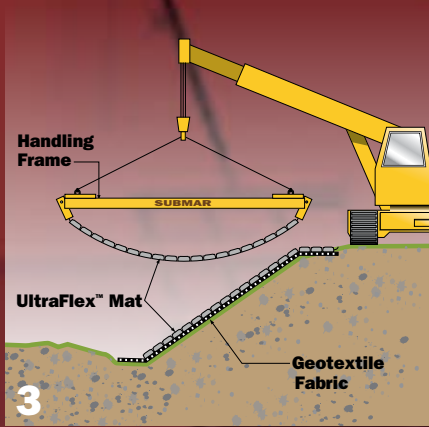
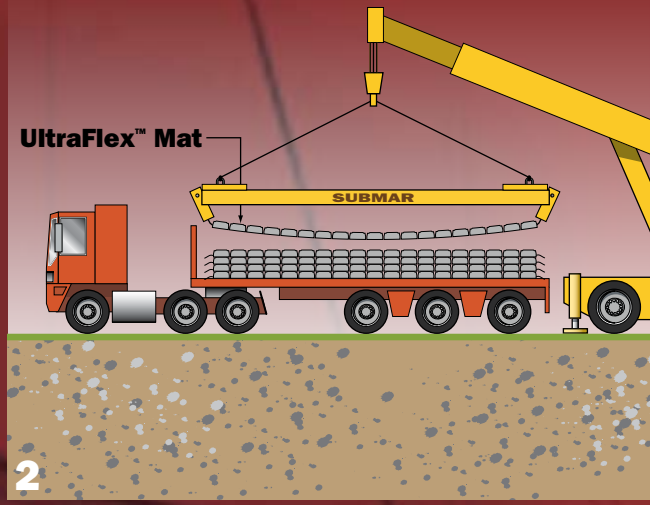
- Ideal for vegetative growth
- Environmentally friendly
- Traversable surface
- Time-tested strength
- Conforms to ground contours
- Durable and long-lasting performance
- Value-added erosion solutions
- National product availability
- Engineered submittals
- Site-specific customized mat sizes
- Installation assistance at job site

The UltraFlex Place-N-Lace™ block installation by Submar is available for projects that have challenging installation requirements limited by large equipment or obstructions.

The ability of UltraFlex™ to be installed in mat form or by hand is yet another example of the versatility and cost-effective nature of Submar.



UltraFlex™ Installation



Before



After

UltraFlex™ — The answer to your erosion problem.

No matter what erosion control problem and other considerations are included in your project, you can be sure Submar has successfully solved them with budgets in mind. Submar's engineered systems are a dynamic state combining time-tested articulated concrete mat technology and "green" design applications offering our customers a wide variety of value-added solutions while protecting nature.

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