WINFAB® GEOTEXTILE TUBES

WINFAB Geotextile Tubes are an efficient, economical, and flexible technology to provide solutions to the Construction, Environmental and Marine markets.

Geotextile tubes used for dewatering &/or sludge removal offer an alternative to wet hauling, sludge lagoons, sand drying beds and other mechanical methods. WINFAB Geotextile Tubes are a simple and high capacity solution to capturing sediment and clarifying water. WINFAB Geotextile Tubes easily separate solids from sludge. The cost is low compared to traditional dewatering solutions, simple in concept, and capable of high capacity.

Geotextile tubes used for Marine structures protect against storm activity, dissipate wave energy, protect land areas and prevent erosion.

BENEFITS

- Cost effective and low maintenance compared to traditional technologies
- High capacity retention of solids
- High effluent discharge dewatering capability
- Custom sized for specific applications to improve the efficiencies of project foot prints
- Optimize land usage

PRODUCT APPLICATIONS

- Sludge Dewatering
- Shoreline Protection
- Marine Dredging
- Marine Structures
- Waste & Sludge Lagoons
- Waste Water & Water Treatment
- Agriculture / Animal Waste Management

INDUSTRIES SERVED

- Construction
- Transportation
- Marine
- Mining
- Water Treatment
- Waste Water Treatment
- Pulp and Paper
- Food Processing
- Agriculture

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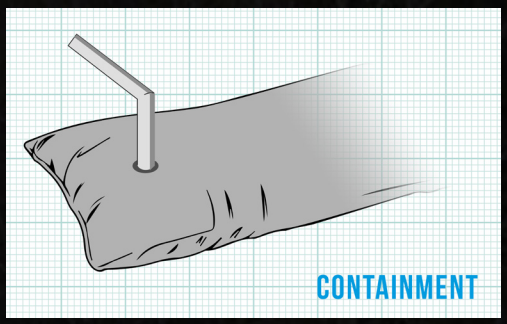
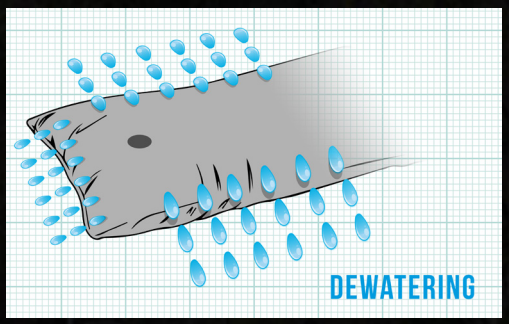
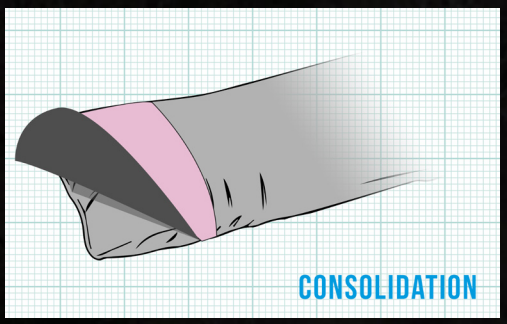
WINFAB® GEOTEXTILE TUBES
DEWATERING APPLICATIONS







Containment - Sludge or silt is pumped into the WINFAB Geotextile Tube.

Dewatering - Contaminent is filtered out and clean effluenet water escapes from the tube.

Consolidation - Solids are contained for utilization or disposal. Up to 95% of the contaminants are captured.

Captured solids can be disposed of or repurposed. Floculents can be used to fortify the process, but are not required.

Geotextile Tube Circumference (feet)	Estimated Dewatering Volume (Cubic yards per linear foot)	
	Silt and Organics	Sand and Minerals
15	0.54	0.50
22.5	1.26	1.12
30	2.07	1.77
45	3.78	3.19
60	5.76	4.83
75	4.92	6.72
90	10.39	8.32
120	14.60	12.3

Geotextile Tube Circumference (meters)	Estimated Dewatering Volume (Cubic meters per linear meter)	
	Silt and Organics	Sand and Minerals
4.57	1.35	1.25
6.86	3.16	2.8
9.14	5.19	4.4
13.72	9.53	8
18.29	14.55	12.1
22.86	19.82	16.9
27.43	26.09	20.9
36.6	36.62	30.8

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WINFAB® GEOTEXTILE TUBES
COASTAL AND MARINE PROTECTION

Coastal and Marine Engineering applications include:

- Coastal Protection
- Waterway Protection
- Dams & Levees
- Ports & Harbors

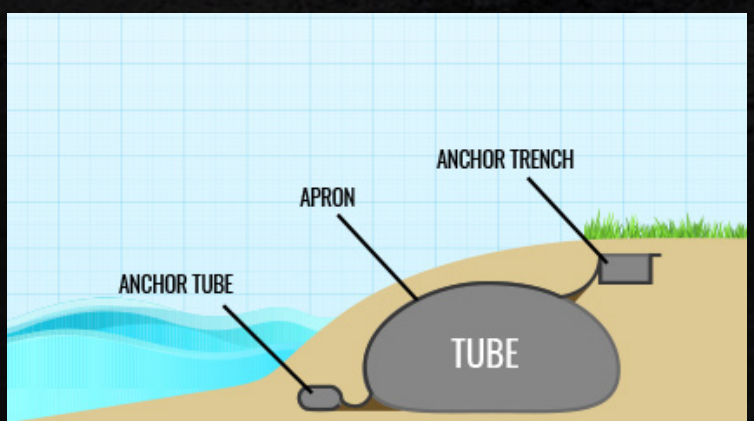
WINFAB Geotextile Tubes as Marine Structures:

WINFAB Geotextile Tubes and Geo-synthetics are used in construction and protection of Marine Engineered Structures and Coastal Management.

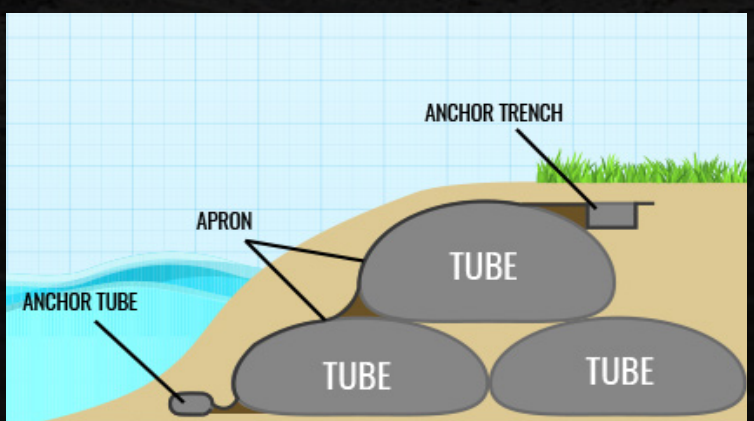
WINFAB products are environmentally friendly, flexible and provide reliable, cost effective solutions to battle the effects of erosion. Coastal Protection is used to prevent coastline erosion and retreat to preserve natural landscapes, protect housing and infrastructure, thus providing good Coastal Management.

Waterway Protection prevents erosion and shoreline retreat of any of the waters. Dams and Levees are used to prevent flooding, storage of water, enable easier construction and to provide protection from storm activity. Ports and Harbors provide locations where ships can dock, transfer cargo and provide shelter.

Apron can protect scour, UV, or an HP-TRM can be used to establish plant growth.



Shoreline Protection Tube



Design Flexibility Based on Application

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COASTAL AND MARINE PROTECTION

WINFAB Geotextile Tubes function to act as:

Breakwaters - Built out into a body of water to protect a coast or harbor from the force of waves.

Dikes - Onshore structures with the principal function of protecting low-lying areas against flooding. Sea dikes are usually built to reduce the wave run up and the erodible effect of the waves.

Revetments - Placed to absorb the energy of incoming water.

Scour Protection - Protect against hydrodynamic, tidal and bridge scour. Scour, caused by swiftly moving water, can scoop out scour holes, compromising the integrity of a structure. It is a notable problem with marine structures supported by the seabed in areas of significant tidal and ocean current.

Groynes - A groyne, built perpendicular to the shore, is a rigid hydraulic structure built from an ocean that interrupts water flow and limits the movement of sediment.

Land Creation - Artificial islands or land created by incidental isolation.

WINFAB Geotextile Tubes Advantages include:

- **Construction cost efficiency -** Less manufacturing, transportation, and placement cost.
- **Faster implementation/implementation -** Over conventional technologies.
- **Greener solution -** Colored to blend into the natural landscape, and then covered with plant life on top of the tube.
- **Longer lifespan -** Typically withstanding the rigors of nature better than traditional “hard” solutions.

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