



BioHaven® Floating Breakwater

Product Data Sheet

1.0 Description

The **BioHaven® Floating Breakwater** is a floating structure manufactured with using layers of recycled Polyethylene terephthalate (PET) matrix sheets that are adhered together with Coast Guard approved marine foam for buoyancy. The **BioHaven® Floating Breakwater** is encapsulated in a nylon netting system for anchoring and coated with spray polyurea armoring. Plant holes are also pre-cut in order to grow vegetation hydroponically.

2.0 Use

The **BioHaven® Floating Breakwater** is a proprietary breakwater product developed to attenuate wave energy for the use of shoreline protection, bank stabilization and marsh/habitat creation. It is effective at reducing wind chop, thereby reducing shoreline erosion and creating wildlife, fish and water fowl habitats.

3.0 Ideal Applications

- Interior Marsh Creation
- Habitat Restoration
- Areas with Poor Soil Quality

4.0 Advantages

- Lightweight
- Easy to Install
- Creates Instant Wildlife Habitat

Breakwater Property	Value
Thickness*	10 inches
Weight (10" thick/15lb. buoyancy)	2 lb./ft ²
Color	Brown
Plant Holes Size	4" diameter
Matrix Properties	Value
Matrix Tensile	20 lb./ in. (1 layer)
Matrix Tear	20 lb./ in. (1 layer)
Matrix Fiber Type	100% Recycled Polyethylene terephthalate (PET)
Matrix Binder System	Cross Linkable Water Based Latex
Binder Application	Spray/Thermal Bond

Foam Properties	Value
Foam Type	Two Part Polyurethane Marine Foam
Ecotoxicity	Not known to be toxic to aquatic organisms
Netting Properties	Value
Double Strand Nylon Netting	84 Nylon x 4in. square
Polyurea Properties	Value
VOC	0%
Tensile Strength (ASTM D638)	2000-2800 (lb/in)
Tear Strength (ASTM D624)	300-450 (lb/in)
Environmental	Food Contact Certified; will not leach
Ecotoxicity	Not known to be toxic to aquatic organisms;

5.0 Physical Properties

6.0 Sizes

BioHaven® Floating Breakwaters come in 2 sizes:

5'W x 19.5'L x 10"D; Approximately 210 plant holes

7.5'W x 19.5'L x 10"D; Approximately 315 plant holes

7.0 Buoyancy

BioHaven® Floating Breakwaters are manufactured with a standardized 15 pounds per square foot of buoyancy. The buoyancy of **BioHaven® Floating Breakwaters** can also be customized for specific project needs.

8.0 Vegetation

Both aquatic and terrestrial vegetation can be planted and grown hydroponically in **BioHaven® Floating Breakwaters**. Native or local plants are recommended.

9.0 Limitations

BioHaven® Floating Breakwaters should not be installed in high wind and wave locations with water depths greater than 4.5 feet. Consult **Martin Ecosystems** for other available systems.

*Thickness is approximate. Each layer of matrix is approximately 2" thick. Compression during manufacture may decrease thickness slightly.

10.0 Environmental Safety

- The matrix is manufactured with 100% recycled Polyethylene terephthalate (PET) plastic drinking bottles. Water Based Latex Resins are used in the matrix manufacturing process. No phenol-formaldehyde resins are used in the binding process. The matrix has been tested and was found to be non-toxic to aquatic life.
- The polyester matrix fibers (PET) are non-reactive and resistant to attack by micro-organisms. PET is inert, won't biologically degrade and will not leach. PET is also inherently more UV resistant than other plastics, like polypropylene, because of its molecular structure.
- The polyurea coating is perfect for marine environments because it is inert, it will not hydrolyze, leach or contaminate. It provides UV protection, contains no VOCs and is direct food contact approved.

11.0 Green Initiative

- Polyester fiber used in our matrix material comes from 100% recycled PET plastic drinking bottles.
- Every 1 square foot of 2" thick matrix is manufactured using 3 (16.9 oz) plastic bottles.

12.0 Safety

Basic safety for personal protection is:

- Wear long sleeves and/or gloves when handling to avoid skin scratching and abrasions.
- Do not put or use near high heat or open flames.

13.0 Technical Services

Contact **Martin Ecosystems** for Sales and Customer Support 225-292-6750

14.0 Warranty

Martin Ecosystems will refund the price of or replace, at its election, this product to the original purchaser, if it finds to be defective of materials and or workmanship, provided the product has been used properly. Except as stated above, the company makes no warranty of damage caused by the owner modifying, attempting to fix or otherwise altering the product from its original embodiment and no warranty of installation of product. This warranty lasts for one (1) year from the date of original

purchase. This warranty covers the original purchaser and is not transferrable. In no event shall the company be responsible for damage to or loss in shipment. This limited warranty does not insure the product during shipment. This warranty is the sole and exclusive warranty. No employee, agent, dealer, or other person is authorized to alter this warranty or make any other warranty on behalf of Martin Ecosystems. No Other Express Warranty Applies. Martin Ecosystems shall not be responsible for any incidental or consequential damages. Some states do not allow the limitation or exclusion of relief, incidental, consequential, special or indirect damages, or the limitation of liability to special amounts, so the above limitations or exclusions may not apply to you.



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