

*MARINE INDUSTRY STANDARDS
for Encapsulated Dock Flotation*

Encasement wall thickness standard:

0.150" nominal and 0.125" minimum thickness

Falling Dart Impact Test – ASTM D1998-06:

Proves quality for both material and molding process.

7 Day Hunt Water Absorption Test:

Maximum water absorption rate of 3.0 lbs per cubic foot of foam • Minimum foam density of 1.0 pcf.

Flexural Strength Test ASTM C203:

Minimum of 5.5 lbs weight • Test correlates to the 7-Day Hunt Test to ensure the EPS foam is fused together properly promoting better resistance to water absorption.

Flame Retardant Test: ASTM D4986-03:

Provides higher level of assurance the float will not ignite if there is an accident.

Certified Tank Test Buoyancy Test:

This provides accurate buoyancy information for proper design and purchasing.

USACE Regulation 36 CFR Part 327:

Excludes the use of raw foam and empty barrels and defines requirements that encapsulated foam must meet.

FLOAT SPECIFICATION

Flotation Units:

1. Shall be capable of attaching to the structural frame by minimum 3/8 inch mounting hardware. Shall have a minimum of six mounting slots molded in float with 2.00" thick mounting flanges.
2. The floats are resistant to damage by animals, ice, bumps by watercraft, and deterioration from petroleum products.
3. The float manufacturer shall be able to furnish Industry Standards test results for each size float furnished as described in Test Documents Required below if requested.
4. The manufacturer must provide a minimum of 15 Year Warranty with the first 10 years 100%.

Flotation Encasement:

1. The encasement shall provide 100% protection to all surfaces of the flotation material and allow zero water to enter the unit.
2. The encasement shall be 100% virgin grade linear low density polyethylene, black in color, with a minimum wall thickness of 0.150.
3. The encasement shall also have the following minimum characteristics:
 - a. Density by ASTM D-792 of 0.941.
 - b. Tensile yield strength by ASTM D-638 of 2930 PSI
 - c. Tensile ultimate strength by ASTM D-638 of 4250 PSI
 - d. Flexural modulus by ASTM D-790 of 119,950 PSI
4. The encasement shall meet for fire UL class 746C and 94HB.
5. The encasement shall meet the ASTM D1998-06 Falling Dart Test to assure the material quality and molding process.

Flotation Material:

1. The flotation material shall be 100% virgin grade polystyrene, expanded in place in the encasement.
2. It shall have a density of 1.0 pcf minimum based on ASTM C-303.
3. It will not sink or contaminate the water if the encasement is punctured.
4. It shall meet UL 1975 and ASTM E84 for fire resistance.
5. The material will meet the "The Seven Day Hunt Absorption Test of less than 3.0 lbs per cubic foot water absorption in seven days per the test requirement.

Test Documents Required: (per Industry Standards for each model supplied)

1. Digital reading of wall thickness based on a minimum of 6 locations per side of encasement. Minimum 0.125" – Nominal 0.150"
2. The Falling Dart Impact Test – ASTM D1998-06
3. 7 Day Hunt Water Absorption Test Maximum 3.0 lbs./cft. Foam Density Minimum 1.0 pcf
5. Flexural Strength Test – ASTM C203 – Minimum 5.50 lbs.
6. Flame Retardant Test – ASTM D4986-03
7. Certified Tank Tested Buoyancy