


### SeaPile and SeaTimber



Manufactured with greater strength and stiffness, Tangent's SeaPile and SeaTimber are well-suited for demanding applications in hostile environments. Excellent compressive strength and impact resistance and well-suited to absorb energy through recoverable deflection. Engineered from recycled HDPE  plastic, UV inhibitors and strengthening fibers, Tangent's SeaPile and SeaTimber are extremely durable and will perform for decades.

### COMMON APPLICATIONS

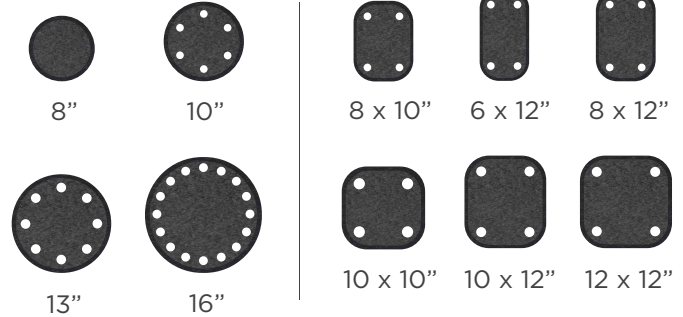
- Fender Piles & Dolphin Clusters
- Curbs & Backing Beams
- Wales
- Rub Rails & Wear Strips
- Camels
- Cribbing & Dunnage
- Chocks & Blocks
- Pier, Walkway & Decking Substructure

### TECHNICAL INFORMATION

Properties	ASTM	Value/Units
Specific Gravity	D792	61.3 lb/cu ft - 65.0 lb/cu ft.
Flexural Strength	D790	2,620 - 16,430 psi*
Flexural Modulus (Secant, at 1% strain)	D790	154,000 - 1,023,000 psi*
Compressive Strength (Perpendicular to grain)	D6108	2,230 psi
Compressive Modulus (Perpendicular to grain, Secant, at 1% strain)	D6108	65,000 psi
Coefficient of Thermal Expansion	D6341	0.00002 in/in/°F
Static Coefficient of Friction - Dry	D1894	0.15
Impact Resistance (Izod)	D256	4.53 ft-lb/in
Water Absorption	D570	<0.1% in 24 hrs.
Screw Withdrawal	D6117	440 lbs
Useful Temperature Range		-40°F to +140°F

\*value dependent upon profile and reinforcement, please contact to learn more  
All above values shall be considered average except flexural strength. This value must have appropriate reduction factors set by the engineer of record.

### SeaPile      SeaTimber



Call for additional profiles

### STANDARD COLORS



Material Property	Description of Test Method	ASTM	Value/Units
<b>Brittleness</b>	Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact	D746-07	No break at -40°F
<b>Density and Specific Gravity-Skin</b>	Standard Test Methods for Density and Specific Gravity of Plastics by Displacement	D792	60 lbs/cu.ft 0.0347 lbs/cu.in Specific Gravity: 0.96
<b>Density and Specific Gravity-Core</b>	Standard Test Methods for Density and Specific Gravity of Plastics by Displacement	D792	47.8 lbs.cu ft 0.0277 lbs/cu.in Specific Gravity: 0.77
<b>Hardness-Shore D</b>	Standard Test Method for Rubber Property—Durometer Hardness	D2240-Type D	66
<b>Abrasion Resistance</b>	Standard Test Method for Abrasion Resistance of Organic Coatings by Taber Abraser	D4060 CS17 Wheel 10,000 cycles 2.2lb load	Weight Loss 0.001 oz / 0.028g
<b>Ignition Temperature</b>	Standard Test Method for Determining Ignition Temperature of Plastics; Flash Point / Ignition Temperature	D1929-96	682°F
<b>UV: Effect on Hardness</b>	Standard Practice for Florescent UV Exposure of Plastics	D4329 & D2240	500 hrs: 0% Change in Hardness
<b>Chemical Resistance</b>	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	Sea Water: 0.06% weight increase
<b>Chemical Resistance</b>	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	Gasoline: 2.61% weight increase
<b>Chemical Resistance</b>	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	No.2 Diesel: 1.05% weight increase

**SeaPile & SeaTimber:** recycled HDPE with fiberglass filament and fiberglass rebar reinforcement.

**Fiber Reinforced Lumber:** recycled HDPE with fiberglass filament reinforcement.

\*Flexural stiffness & strength can be increased by adjusting reinforcement & processing conditions. Contact for additional info.

*Tangent Technologies, LLC, is a manufacturer of recycled plastic lumber. Tangent does not provide engineering services and assumes no responsibility, or liability, for any element of a projects design and/or construction details.*

## Suitability and Limitations

These products have greater impact resistance than wood but conversely less rigidity, and therefore prior to use a thorough design engineering study must be performed to determine the suitability of SeaPile and SeaTimber in any critical application.

Fabrication is similar to wood and normal woodworking tools can be used. One should be advised that by transforming the product by drilling holes and routing edges the integrity and strength of the part can be altered. Eye protective wear, dusk masks, gloves and normal safety precautions must be used when handling and fabricating the product. (See SDS sheet for more details)

Inherent in SeaPile and SeaTimber products, you will observe a greater coefficient of thermal expansion than stiffer wood products. Therefore, when designing your application, an accommodation must be made to properly allow for expected expansion and contraction over the length of the product.

Static electricity is a naturally occurring phenomenon to all resin-based products. On dry days there is potential to experience a static shock if you walk across SeaPile or SeaTimber and touch a conducting surface such as a metal fixture. The physics is similar to walking across a carpet and receiving a shock when you touch a door handle. We do not warranty against static electricity as it is naturally occurring and is not a manufacturing defect. Contact our technical sales reps to learn how to minimize the generation of static electricity through product selection, available additives and construction details.

During winter conditions, you might find any surface made from SeaPile and SeaTimber to be slippery in snow, wet and frost conditions. Unlike most other surfaces, you can easily spread rock salt or calcium chloride to restore decent traction and melt the frost or ice layer with no harmful effect to the SeaPile and SeaTimber products.

## Warranty

Tangent Technologies LLC, the manufacturer of SeaPile and SeaTimber products, offers a limited warranty that this product will not rot, splinter, decay or suffer structural damage directly from termites or fungal decay under normal use. Tangent Technologies LLC does not recommend or approve this product for all end use applications. The appropriate national and local code authorities should be consulted for safety, suitability and applicability for intended use prior to purchasing product. (See full warranty details)

This guideline and summary is intended to provide the distributor, installer and end user with basic guidelines and technical specifications for designing and properly installing the SeaPile and SeaTimber products. However, the installer and/or purchaser of any SeaPile or SeaTimber product is solely responsible for interpreting specific job conditions and determining the engineering design and suitability of end use and application of any SeaPile or SeaTimber product. Adherence to applicable building and safety codes for specific locations and applications of this product are the sole responsibility of the installer and/or purchaser. In no event shall Tangent Technologies LLC, the manufacturer of SeaPile and SeaTimber products, be liable for labor, installation, reinstallation or for any indirect, punitive, exemplary or consequential damages of any kind whatsoever from the provisions of this information.

*This revision 1.7 [7/21/23] supersedes all other SeaPile and SeaTimber technical data sheets.*