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## TECH SHEET

Foldlite™ materials meet the highest standards for maximum strength at the lowest weight, which results in lightweight, packable watercraft for outdoor recreation enthusiasts. Benefits from Foldlite product materials, in addition to the highest strength-to-weight ratio in foldable craft, include UV protection, anti-static electric, flame retardant and corrosive inhibition. Below are specifics on Foldlite's product components, outlining the strength, durability and quality inherent in all Foldlite watercraft.

### **The Hard Shell Hull**

Foldlite uses polypropylene corrugated sheets to provide maximum strength for the hull on its patented boat design. At a weight of 0.15 lbs/sq. ft. and a tensile strength of 4,000 lbs. / sq. inch, this material provides a strength-to-weight ratio of 32,000 to 1. When compared to a standard rigid-shell material used in the majority of kayaks and canoes, corrugated polypropylene represents a greater strength-to-weight ratio of 10-to-1. Additionally, this material provides the safety and durability of a double-layer design, which provides a double-hull for each of the Foldlite models. It is very unlikely that Foldlite users will experience impact-damage that can occur with standard rigid-shell boats, where cracks or ruptures result from high-impact. Foldlite boat hull material and modular design results in high-impact shock absorption by utilizing the inherent strength and flexibility found in polypropylene corrugated panels.

### **The Skin**

Foldlite Boats uses a high-tenacity, 300 denier polyester fabric for its boat skins. This fabric is equal in strength and durability to Hepalon (commonly used by other manufacturers), while creating 40% less weight for the user. All Foldlite models are silicon-coated three times for seam-sealed water-tight integrity (boat bottom) and water-resistance (boat top). Silicon provides these advantages:

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- Ultra-lightweight when compared to PU or PVC
  - Superb water-tight seal for the skin-fabric

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- Superior maneuverability of the boat
  - Enhances overall fabric strength - 20% stronger than Hepalon.

The primary test of strength and durability is known as a "scuff" test, where material fabric is subjected to mechanical "scuffing" to simulate use. Materials subjected to this test are routinely declared "indestructible" after 50,000 scuffs. Laboratory tests on Foldlite fabric exceeded 100,000 scuffs with no degradation to its material, including uncompromised water-tight integrity, impervious seam seals and silicon-coated protection.

## **The Ribs**

Modular ribs are an integral part of Foldlite design. Foldlite ribs serve to "anchor" the hull and deck-panels together, and provide rigidity and strength to the assembled hard-shell. All Foldlite ribs are made of molded polypropylene and are designed to provide the greatest strength-to-weight ratio.

Foldlite products contribute to the reduction of environmental waste.



## **Reduce**

Fluted polypropylene hull and deck panels, polyester skin fabric and components, and polyethylene ribs produce strength and rigidity with low weight and material requirement.

## **Reuse**

The durability of Foldlite boats means a long product life. Foldlite packaging is reusable.

## **Recycle**

Foldlite uses polypropylene, polyester, and polyethylene copolymers that are easily recycled at the end of their useful life. These materials are recycled into processing streams, including plastic milk cartons and detergent bottles.