



# Technical Note 1: Advantages of Polyethylene over ABS Plastic



# The Sealite Advantage



Buoy Manufacturing:	Advantages of Polyethylene over ABS Plastic	
	Polyethylene from Sealite	ABS (Acrylonitrile Butadiene Styrene) from Other Manufacturers
<b>Process</b>	Rotationally molded polyethylene is poured into a mold then spun on a rotational molding machine for uniform thickness.	Sheets of plastic are vacuum formed or heated to form the desired buoy shape.
<b>Construction</b>	No seams anywhere; all Sealite products are molded as single pieces for uniform strength.	Seams are evident where the sheets of plastic are joined together, creating potential weak spots when joined.
<b>Materials</b>	No toxic chemicals or heavy metals are ever used in the manufacture of any of Sealite's rotationally made products. Sealite is an environmentally conscious company; you can return your buoys to Sealite for recycling once they've reached the end of their service life!	ABS may require the use of toxic (to humans) chemicals to increase the impact strength and to maintain the ability to form into shape.
	Moisture and water particles run off the surface of polyethylene.	As a hydroscopic material, moisture and water particles can be absorbed into the ABS.
<b>Chemical Resistance</b>	Polyethylene is exceptional in its chemical resistance to fuels, oils, and other human by-products which are disposed in the water. That's why Sealite buoys provide a long service life.	ABS is able to achieve its chemical resistancy...after it has the toxic Butadiene added to it.
<b>Moisture Resistance</b>	Polyethylene is classed as polyolefin material which exhibits an extremely high level of moisture resistance.	ABS is moisture resistant...when you add toxic ingredients to it. As a hygroscopic material, moisture and water particles will absorb into the material.
<b>Non-Marine Uses</b>	Surgical implants and surgical tubing, etc.	Automotive trim, (small) appliances like toast-r-ovens and coffee makers, and other applications and products that require heat resistance and flame retardancy.
<b>UV-Stabilization &amp; Color Stability</b>	Only Sealite adds a UV stabilizing compound to both the polyethylene and coloring agents, providing additional protection from the degrading effects of UV exposure.	UV stabilizer added (often times upon request only) to ABS. ABS materials with high levels of butadiene can be difficult to compound colors into.
<b>Filling</b>	Closed cell polyurethane foam means any potential water ingress will not permeate the foams' closed cells, allowing for a longer, more buoyant product should the buoy sustain damage.	Regular foam filling can become saturated if a buoy is punctured, allowing water to penetrate and saturate each cell, adding weight and adding to the risk of submergance.

*It's easy to tell when the buoy you're passing is NOT from Sealite!*

**Other Manufacturer**



**ABS (Acrylonitrile Butadiene Styrene)  
from Other Manufacturers**

**Sealite Product**



**Polyethylene from Sealite**

*Rotational molding - Sealite Factory*



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