



Technical Note 1: Advantages of Polyethylene over ABS Plastic



SL-B1428

The Sealite Advantage



Buoy Manufacturing:	Advantages of Polyethylene over ABS Plastic	
	Polyethylene Buoys from Sealite	ABS Buoys
Process	Rotationally molded polyethylene is poured into a mold and then spun on a rotational molding machine for uniform thickness.	Sheets of plastic are vacuum formed or heated to form the desired buoy shape.
Construction	Seamless; 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.
Materials	No toxic chemicals or heavy metals are ever used in the manufacture of any of Sealite's buoys.	ABS may require the use of toxic materials to increase impact strength and to maintain the ability to form into shape.
Chemical Resistance	Polyethylene has exceptionally high resistance to fuels, oils, and other human by-products that reside in the maritime environment.	ABS requires the addition of Butadiene to be chemical resistant. Butadiene is extremely toxic and harmful to humans and animals.
Moisture Resistance	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.
Non-Marine Uses	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.
UV-Stabilization & Color Stability	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.
Filling	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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