



# *SeaSpheres™*

- Ceramic Spheres
- Hollow
- Seamless
- Ultra-light
- Depths up to 11km
- Zero maintenance
- Many sizes available



DeepSea Power & Lights SeaSpheres™ are engineered to be the highest performance buoyancy product available today for missions to depths greater than 4000m. The spheres unique combination of light weight and high strength allow for larger ROV payloads and longer AUV survey missions in the worlds deepest diving vehicles and scientific instrument platforms.

SeaSpheres™ are cast from high purity alumina ( $Al_2O_3$ ), an incredibly strong and lightweight ceramic. In fact, the spheres are so strong and incompressible that their buoyancy actually increases with depth. Alumina is also an excellent electrical insulator, transparent to radio frequencies and virtually inert in caustic environments. The spheres can be manufactured with varying wall thickness' in order to tailor their weight and strength to mission requirements. SeaSpheres™ are engineered with a seamless design and held to exacting tolerances during manufacturing and testing to insure a long and reliable service life.

## SeaSphere – Ceramic Sphere Specifications

	<b>3.6" (90mm)</b>	<b>5.0" (128mm)</b>	<b>6.0" (152mm)</b>	<b>8.5" (216mm)</b>	
Depth Rating	11,000m 36,089ft	11,000m 36,089ft	11,000m 36,089ft	6000m 19,685ft	11,000m 36,089ft
Specific Gravity	0.35	0.36	0.35	0.24	0.36
Buoyancy	0.27 kg 0.60 lbs	0.71 kg 1.57 lbs	1.24 kg 2.74 lbs	4.12 kg 9.08 lbs	3.52 kg 7.75 lbs
Air Weight	0.14 kg 0.31 lbs	0.39 kg 0.39 lbs	0.65 kg 1.44 lbs	1.28 kg 2.82 lbs	1.89 kg 4.15 lbs
Buoyancy to Air Weight Ratio	1.93	1.86	1.90	3.22	1.87
Material	Alumina (Al <sub>2</sub> O <sub>3</sub> ) 99.9% pure.				
Porosity	0%				
<b>Protective Boots</b>					
Boots Available	Yes	No	No	Yes	
Boot Type	Overlapping Flexible Halves			Polyhedral SeaShell	
Material	Versaflex 40			Linear Low Density Polyethylene	
Material Density	~.89 g/cm <sup>3</sup>			~0.93 g/cm <sup>3</sup>	
Module Specific Gravity	.49			0.34	0.43
Module Buoyancy	0.29kg 0.64lbs			4.18kg 9.22lbs	3.58kg 7.89lbs
Module Air Weight	0.27kg 0.59lbs			2.08kg 4.59lbs	2.65kg 5.84lbs
Module Buoyancy to Air Weight Ratio	1.07			2.01	1.35
Packed Module Buoyancy / Volume				340 kg/m <sup>3</sup> 21 lbs/ft <sup>3</sup>	
Module Dimensions	4" round			10.5" (26.6cm) x 10.5" (26.6cm)	