



# HZ Grade

## Microsphere Syntactic Foam

## Technical Data Sheet

### Highlights

- **Operational Depth Range (6 000 —10 911 Meters)**
- **Lowest Density Available in the Entire Industry**
- **Premium Performance at Deepest Depths**
- **High Compressive and Hydrostatic Strength**
- **Standard Forms and Customization Options**
- **Low Water Absorption**

### Premium Performance

HZ Grade syntactics are formulated to survive crush pressures greater than 20 000 psi, for safe operation in the Hadal Zone. Produced from the most advanced resin and hollow glass microspheres available, these homogeneous materials provide the industry’s lowest density for this extreme depth range.

### Industry Applications

Ultra-buoyant HZ Grade materials are predominantly used for deep water AUV, ROV and HOV applications, where reliable performance, increased payload and longer mission duration at extreme depths are critical for successful operation.

### Product Availability

HZ Grade syntactic foams are available in block form and may be readily used for customer assembly or cut to fit application requirements. Blocks or trimmed parts may also be bonded together to form larger structures. Standard block size is 4” x 12” x 24”. Custom sizes and shapes are available upon request.



### Typical Properties

Product	Density	Service		Weight Gain	Hydrostatic Crush	Compressive	
		Pressure	Depth			Strength	Modulus
	lb/ft <sup>3</sup> (g/cc)	psi (Bar)	feet (meters)	24 hrs @ depth	psi (Bar)	psi (MPa)	ksi (GPa)
<b>HZ - 34</b>	34 ± 2 (0.55 ± .03)	10 150 (700)	23 000 (7 000)	2% Max	> 15 250 > (1 050)	12 200 (84.1)	515 (3.55)
<b>HZ - 42</b>	42 ± 2 (0.67 ± .03)	18 000 (1 241)	40 900 (12 460)	2% Max	> 24 000 > (1 650)	16 000 (110)	650 (4.48)
<b>HZ - 45</b>	45 ± 2 (0.72 ± .03)	18 000 (1 241)	40 900 (12 460)	2% Max	> 24 000 > (1 650)	17 000 (118)	675 (4.65)