

Thermoplastic Syntactic Foam

DamageShield - XTB

Technical Data Sheet

Premium Performance

Damage Shield - XTB is a low-density thermoplastic syntactic material specifically formulated to provide extremely high toughness while still providing buoyancy in deep-water applications. Used in applications normally suited for solid polymers or composites, Damage Shield - XTB offers both impact resistance and lift.

Product Availability

This engineered thermoplastic may be painted with standard marine grade coatings to color match any vehicle, and is easily machined to shape and may be drilled and tapped for insert installation or through-hole attachment.

Damage Shield – XTB is available in sheet form and may be readily used for customer installation. Standard sheet sizes range from:

1.0" x 24" x 48" (25 x 610 x 1,219 mm) up to 4" x 24" x 48" (102 x 610 x 1,219 mm).

Custom sizes and coatings are available upon re-request.

Industry Applications

Providing more than 5 times the lift than traditional materials, Damage Shield - XTB is ideally suited for high abuse areas such as bumpers, impact pads or structural supports for AUVs and ROVs.

	Density	Depth Rating	Hydrostatic Crush	Compressive		Flex		Tensile		Thermal Conductivity	CTE
	lb/ft ³ (g/cc)	ft (meters)	Psi (Bar)	Strength	Modulus	Strength	Modulus	Strength	Modulus	BTU in/ (hr ft ² °F) (W/m°C)	In/in/°F (m/m°C)
				Psi (Mpa)	Ksi (Gpa)	Psi (Mpa)	Ksi (Gpa)	Psi (Mpa)	Ksi (Gpa)		
XTB 820	51.2 (0.82)	22,960 (7,000)	> 24,000 (>1,655)	16,500 (113)	618 (4)	9,073 (62)	739 (510)	7,250 (50)	805 (6)	118 (0.17)	19.0E-06 (32.4E-06)
XTB 880	54.9 (0.88)	29,520 (9,000)	> 24,000 (>1,655)	17,400 (120)	680 (4)	9,188 (63)	813 (6)	8,300 (57)	880 (6)	132 (0.18)	17.0E-06 (30.6E-06)

Highlights

- Operational Depth Range (Down to 9,000 Meters)
- Offers extremely high impact resistance PLUS buoyancy

- Delivers 5X more lift than standard materials
- Can be easily machined to shape & drilled for inserts or attachments
- Standard Forms and Customized Options