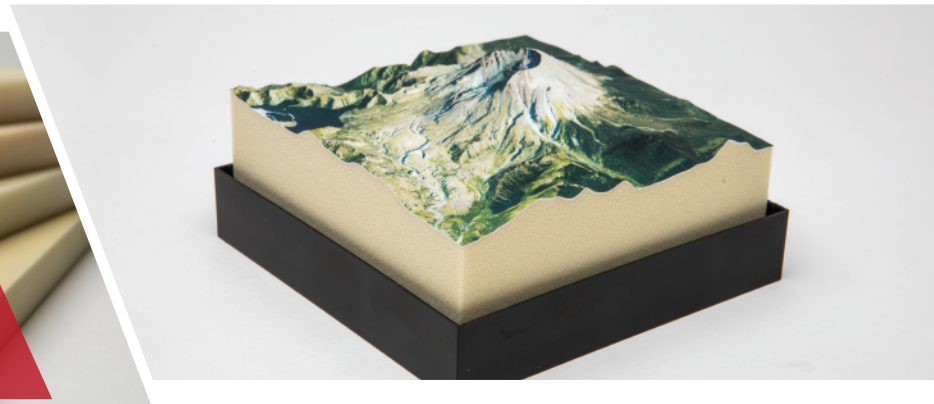
GENERALPLASTICS MANUFACTURING COMPANY

WHERE GREAT IDEAS TAKE SHAPE.



LAST-A-FOAM® FR-7100 MULTI-USE FOAM SERIES

LAST-A-FOAM® FR-7100 is a uniform polyurethane foam board that is easily finished or painted for low-cost core applications, hand-carved models, prototypes, CNC-machined topographical maps, industrial patterns, and composite layup tools below 200°F (93°C). It is non-abrasive and can be machined with standard high-speed steel (HSS) cutting tools.

COMPOSITE CORE

FR-7100 boards can be used in multiple densities. The ability to combine high and low densities in one layup makes it an ideal material for composite layups. The material contains no mold-release agents to inhibit bonding.

MARINE

These products are formulated to meet the demands of composite boat builders at competitive prices for marine usage: freezer insulation, fish boxes, interiors, seat mounting pads, steering wheel mountings, and decks.

PROTOTYPES & MODELS

The FR-7100 material is suitable for hand-carved models, CNC-machined topographical maps, prototypes, and industrial patterns.

TOOLING

FR-7100 products have been used successfully in modeling foam tooling applications for many years. This material meets the needs of mold and toolmakers because it is stress-free, easy to machine, and uniform in density throughout the block. For applications requiring higher strength, greater detail, or increased heat and pressure resistance at process temperature, a density of 20 pound per cubic foot is usually the best choice. Typical uses include composite layup tools, drape-forming tools and vacuum-form tools.

FEATURES & BENEFITS

- Will not warp or bow
- Chemically inert
- Dimensionally stable
- Grain-free stock material
- Smooth finish
- Closed-cell
- Easily bonded and finished with a wide variety of adhesives and coatings
- Low densities can be hand carved and shaped easily with woodworking tools
- Higher densities are available for CNC work where more accuracy is desired

POTENTIAL APPLICATIONS

- Radomes and antenna
- Proof stock
- Composite core
- Prototype models
- Styling models
- Tooling aids
- Check fixtures
- Mold and foundry patterns
- Decorative trim

CERTIFICATIONS & QUALITY SYSTEMS

ISO 9001:2015/AS9100D
NQA-1
Mil-I-45208A
Boeing Company D6-82473
ITAR-Compliant

All General Plastics' products are manufactured in the United States and are free of CFCs and VOCs.

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PHYSICAL PROPERTY DATA

PROPERTY	UNIT	FR-7104	FR-7106	FR-7108	FR-7110	FR-7115	FR-7118	FR-7120	FR-7125	FR-7130	FR-7140	TEST METHOD
Density	lbs/ft^3	4	6	8	10	15	18	20	25	30	40	ASTM D-1622
	kg/m^3	64	96	128	160	240	288	320	400	481	641	
Compressive Strength (75°F)	psi	110	150	240	315	510	660	1,060	1,760	2,370	4,220	ASTM D-1621
	kPa	750	1,050	1,650	2,150	3,500	4,550	7,300	12,100	16,300	29,100	
Tensile Strength	psi	90	150	200	250	390	560	750	1,100	1,400	2,320	ASTM D-1623 Type A Specimens
	kPa	600	1,050	1,400	1,700	2,700	3,850	5,150	7,600	9,650	16,000	
Shear Strength	psi	40	100	150	200	400	550	625	950	1,275	1,725	ASTM C273 in Compression *Modified sample size - 0.25"x1.0"x3.0"
	kPa	300	700	1,050	1,400	2,750	3,800	4,300	6,550	8,800	11,900	
Flexural Strength	psi	100	170	300	400	660	750	1,020	1,550	1,940	3,400	ASTM D-790 Method 1-A
	kPa	700	1,150	2,050	2,750	4,550	5,140	7,050	10,700	13,400	23,400	
Coefficient of Thermal Expansion (CTE)	in/in-°F	31×10^{-6}										From -50 to +200°F, GP Method
	m/m-K	56×10^{-6}										
Max Use Temperature	°F	220										
	°C	104										

rev. 6.19.2019

Values shown are parallel to the direction of rise and representative values.

This data is subject to revision and changes due to development of and changes to the material. The data is derived from tests and historical usage. The data is averaged data and should be treated as such. These values do not constitute a sales specification. Calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute a warranty or representation in respect to the material or its use. The company reserves the right to release new data sheets in replacement.

For additional physical property data, please contact our technical sales group at 253.473.5000 or sales@generalplastics.com

STANDARD SHEET SIZES

PRODUCT	HEIGHT in (cm)	WIDTH in (cm)	LENGTH in (cm)
FR-7104	24 (61)	48 (122)	96 (244)
FR-7106	24 (61)	48 (122)	96 (244)
FR-7107	24 (61)	48 (122)	96 (244)
FR-7108	24 (61)	48 (122)	96 (244)
FR-7110	24 (61)	48 (122)	96 (244)
FR-7110	25 (64)	18 (46)	100 (254)
FR-7112	25 (64)	48 (122)	96 (244)
FR-7115	25 (64)	48 (122)	96 (244)
FR-7118	18 (46)	48 (122)	96 (244)
FR-7120	18 (46)	48 (122)	96 (244)
FR-7130	12 (31)	48 (122)	100 (254)
FR-7135	12 (31)	24 (61)	96 (244)
FR-7140	12 (31)	26 (66)	100 (254)