

LAST-A-FOAM® FR-4700

High-Temp Tooling Board Series



PRODUCT OVERVIEW

LAST-A-FOAM® FR-4700 HT Tooling Board Series is a high-temperature, high-density epoxy-urethane foam that is non-abrasive and can be machined and cut with HSS cutters or any standard cutting tool. It can be bonded to itself or other substrates using urethane or epoxy adhesives. An economical alternative to metallic tools and molds.

SIZE CHART

PRODUCT	THICKNESS (MAX)	SIZE (MAX)
FR-4718	12"	48" x 96"
FR-4730	11"	24" x 96"
FR-4740	11"	24" x 96"

KEY BENEFITS

- Applications up to 400°F (200°C) peak temperature
- High-temperature continuous use up to 350°F (117°C)
- Compatible with commercial pre-pregs
- Ready-to-use with no outgassing or cure inhibition
- Dimensionally stable
- Large block sizes available
 - Reduced bond lines
 - Reduced bonding labor
- Excellent surface finish
- Easy machinability

APPLICATIONS:

- Prototype machining
- Prepreg composite layup tools
- High-temperature curing prepregs
- Vacuum form tooling
- Tool proofing
- Pattern making
- Master model making
- Master plugs and molds
- Short productions runs
- Monolithic tools and molds

Call us at 866.825.1378 today for a quote!

PHYSICAL AND THERMAL PROPERTIES DATA

	FR-4718	FR-4730	FR-4740	Test Method
Density, pcf (kg/m ³)	18 (290)	30 (480)	40 (640)	ASTM D-1622
Compressive Strength, psi (MPa)				ASTM D-1621
Parallel to rise @ 75°F (24°C)	1,350 (9.29)	3,350 (23.1)	4,950 (34.1)	
Parallel to rise @ 350°F (177°C)	665 (4.59)	1,640 (11.3)	2,700 (18.6)	
Perpendicular to rise @ 75°F (24°C)	1,060 (7.34)	2,790 (19.2)	5,000 (34.5)	
Perpendicular to rise @ 350°F (177°C)	387 (2.67)	930 (6.41)	2,750 (18.9)	
Compressive Modulus, psi (MPa)				ASTM D-1621
Parallel to rise @ 75°F (24°C)	46,400 (320)	71,200 (491)	110,000 (758)	
Parallel to rise @ 350°F (177°C)	26,100 (180)	44,700 (308)	72,800 (502)	
Perpendicular to rise @ 75°F (24°C)	31,800 (219)	59,300 (409)	106,000 (733)	
Perpendicular to rise @ 350°F (177°C)	10,000 (69.2)	23,000 (158)	68,600 (473)	
Flexural Modulus, psi (MPa)	14,200 (98)	67,700 (467)	153,000 (1050)	ASTM D-790
Flexural Strength, psi (MPa)	282 (1.94)	1,280 (8.83)	2,170 (15.0)	ASTM D-790
Tensile Strength, psi (MPa)	290 (2.0)	690 (4.8)	2300 (16.0)	ASTM D-1623
Coefficient of Thermal Expansion (CTE)	75°F-400°F, 27x10 ⁻⁶ in/in*°F (24°C-205°C, 46x10 ⁻⁶ m/m*K)			ASTM E831 (modified-temp range)
Glass Transition Temperature [T _g], °F (°C)	428 (220)	426 (219)	424 (218)	ASTM E-1824
Thermal Conductivity, BTU*in/ft ² *°F*h (W/m*K)	0.42 (0.06)	0.63 (0.09)	0.91 (0.13)	ASTM C-518 AT 75°F (24°C) mean temp

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 average data and should be treated as such. 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.

General Plastics is certified to ISO 9001:2008/AS9100C and meets such demanding quality systems as NQA-1, MIL-I-45208A, and Boeing Company D6-82479.



Where Great Ideas Take Shape

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

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