GENERALPLASTICS MANUFACTURING COMPANY

WHERE GREAT IDEAS TAKE SHAPE.

LAST-A-FOAM® FR-3700 PERFORMANCE CORE SERIES

LAST-A-FOAM® FR-3700 is a CFC-free, rigid, closed-cell, flame-retardant polyurethane foam available in densities ranging from 3 to 40 pounds per cubic foot. Tougher and less friable than other rigid foam materials, this aerospace-grade, BMS 8-133-qualified foam enables cutting of crisper edges, making it well-suited to machining complex shapes for composite cores. It exhibits a high strength-to-weight ratio due to its cellular structure and cross-linked resin. Because of its closed-cell structure, FR-3700 has excellent resistance to water absorption and will not swell, crack, or split on exposure to water. The FR-3700 series provides exceptional protection for hazardous cargo and payloads as an impact- and fire-insulation liner in transport or packaging containers. It also serves as human bone test media.

CHEMICAL RESISTANCE

LAST-A-FOAM® products exhibit very good resistance to a wide range of chemicals and solvents. Common petroleum products such as oil or gasoline have no effect on LAST-A-FOAM®. Our products are thermoset materials that is resistant to fungal growth and will not break down over time. If you need specific advice regarding chemical resistance, please contact us.

MATERIAL HANDLING & SAFETY STORAGE

Rigid LAST-A-FOAM® should be stored as any other combustible organic solid. Storage precautions for wood are adequate. Scrap and waste LAST-A-FOAM® materials are inert and can be disposed of as ordinary solid waste. However, cutting, planing, shaping, routing and sanding LAST-A-FOAM® produces dust. The inhaling of foam dust, as with any dust, should be avoided. Safety equipment appropriate for use in avoiding dust inhalation should be used when working with LAST-A-FOAM®.

FIRE SAFETY

Although LAST-A-FOAM® rigid polyurethane foam is flame retardant, it is an organic material which will burn in the presence of enough heat and oxygen. The Federal Aviation Regulation (FAR) 25.853 flame test is commonly used to assess the relative burning characteristics of foam plastic materials under controlled laboratory conditions. LAST-A-FOAM® FR-3700 meets the FAR 25.853 12-second and 60-second ignition requirements.

FEATURES & BENEFITS

- Dimensionally stable
- Chemically inert
- Resistant to most chemicals and solvents
- Highly machinable
- Easily shaped with common woodworking tools
- Performs well as wood replacement
- High strength-to-weight ratio from cross-linked resin
- Flame retardant

POTENTIAL APPLICATIONS

- Models and design prototypes
- Composite core
- Interior sandwich panels used in overhead storage bins, passenger cabin class dividers, galleys and lavatories
- Vacuum form dies and mold patterns

CERTIFICATIONS & QUALITY SYSTEMS

ISO 9001:2015/AS9100D
NQA-1
Mil-I-45208A
Boeing Company D6-82473
ITAR-Compliant
Nadcap AC7130 Rev C.
Nadcap AC7130/1 Rev A.

PHYSICAL PROPERTY DATA

PROPERTY	UNIT	FR-3703	FR-3704	FR-3705	FR-3706	FR-3708	FR-3710	FR-3712	FR-3718	FR-3720	FR-3725	FR-3730	FR-3740	TEST METHOD
Density	lbs/ft^3	3	4	5	6	8	10	12	18	20	25	30	40	ASTM D-1622
	kg/m^3	48	64	80	96	128	160	192	288	320	400	481	641	
Compressive Strength (75°F)	psi	45	70	110	150	220	300	370	1,100	1,250	2,200	2,950	4,500	ASTM D-1621
	kPa	310	480	760	1,050	1,500	2,050	2,550	7,600	8,600	15,200	20,300	31,000	
Tensile Strength	psi	75	100	130	165	220	290	340	740	820	1,400	1,850	2,750	ASTM D-1623 Type A Specimens
	kPa	520	690	900	1,150	1,500	2,000	2,350	5,100	5,700	9,700	12,800	19,000	
Shear Strength	psi	40	65	90	100	170	225	260	575	690	970	1,300	2,000	ASTM C273 in Compression *Modified sample size = 0.25"x1.0"x3.0"
	kPa	280	450	620	690	1,150	1,550	1,800	3,950	4,750	6,700	9,000	13,800	
Flexural Strength	psi	65	100	160	210	310	430	500	1,150	1,250	2,100	2,750	4,150	ASTM D-790 Method 1-A
	kPa	450	690	1,100	1,450	2,150	2,950	3,450	7,900	8,600	14,500	19,000	28,600	
Coefficient of Thermal Expansion (CTE)	in/in-°F	35×10^{-6}												From -50° to +200°F, GP Method
	m/m-K	63×10^{-6}												
Max Use Temperature	°F	280												
	°C	127												

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

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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. This data is averaged 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.

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-3703	24 (60)	48 (120)	96 (240)
FR-3704	24 (60)	48 (120)	96 (240)
FR-3704.5	24 (60)	48 (120)	96 (240)
FR-3705	24 (60)	48 (120)	96 (240)
FR-3706	24 (60)	48 (120)	96 (240)
FR-3707	24 (60)	48 (120)	96 (240)
FR-3708	24 (60)	48 (120)	96 (240)
FR-3710	24 (60)	48 (120)	96 (240)
FR-3712	18 (45)	18 (45)	100 (254)
FR-3712	25 (63)	48 (120)	96 (240)
FR-3718	18 (45)	18 (45)	100 (254)
FR-3725	18 (45)	18 (45)	100 (254)
FR-3730	12 (30)	24 (60)	96 (240)
FR-3730	14 (35)	48 (120)	60 (152)
FR-3730	18 (45)	18 (45)	100 (254)
FR-3740	10 (25)	18 (45)	100 (254)
FR-3740	10 (25)	18 (45)	100 (254)
FR-3740	10 (25)	24 (60)	100 (254)

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