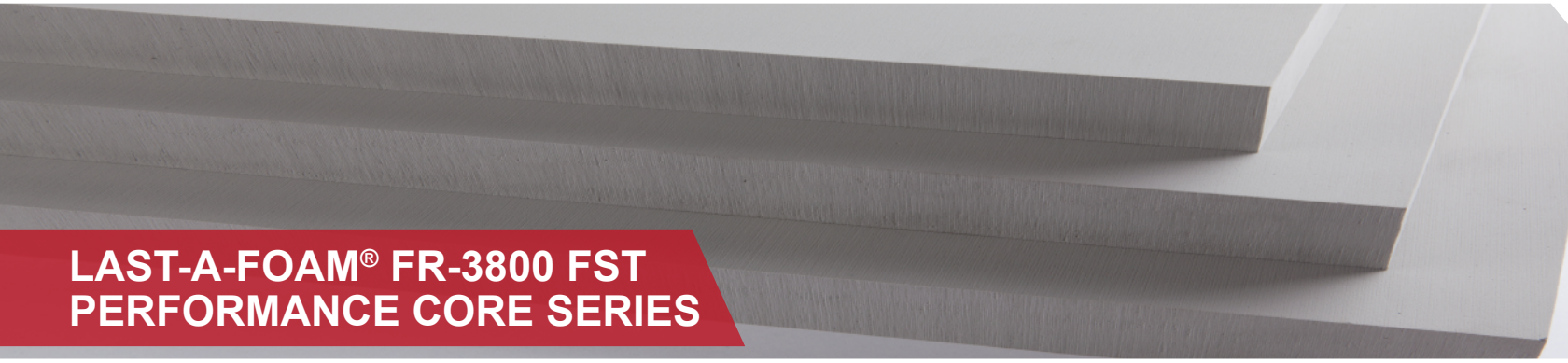
GENERALPLASTICS MANUFACTURING COMPANY

WHERE GREAT IDEAS TAKE SHAPE.



LAST-A-FOAM® FR-3800 FST PERFORMANCE CORE SERIES

LAST-A-FOAM® FR-3800 FST/OSU is a halogen-free polyurethane foam that is compliant with fire, smoke and toxicity (FST) requirements, Ohio State University (OSU) 65/65 heat release standards for aerospace interior applications and REACH regulation. It is available in a wide range of densities, from 3 to 40 pounds per cubic foot, and sheet thickness of up to 24 inches. Custom sizes and thickness are also available.

The FR-3800 FST can be thermoformed, easily machined and bonded. This series offers the ability to operate at a higher temperature than other foams, which provides a larger processing window to manufacture composite parts.

This FST performance core series exhibits high strength-to-weight ratio due to its cellular and cross-linked structure. It meets the mechanical property requirements for core and structural FST applications without the high cost associated with alternative materials such as thermoplastic foams and honeycomb.

With the FR-3800 FST, design and performance goals are achieved while meeting fire safety requirements.

General Plastics also provides FAA-certified in-house testing.

FEATURES & BENEFITS

- Passes fire, smoke and toxicity (FST) requirements
- Meets OSU 65/65 heat release standards
- Sheet thickness up to 24 inches
- Thermoformable into simple curves
- Shapes easily with common machining methods
- Bonds well with composite skins
- Withstands process temperatures up to 310° F (154°C)
- Resistant to water absorption

POTENTIAL APPLICATIONS

- First-class seating pods
- Sandwich core for aircraft interior components
    - Ceiling panels
    - Wall panels
    - Floor ramps
    - Door panels
    - Hard points in composite panels
- Lightweight flyaway parts
- Edge closeouts
- Support/shim pieces
- Mold patterns
- Topographical maps

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-3803	FR-3804	FR-3808	FR-3818	FR-3825	FR-3830	FR-3840	TEST METHOD
Density	lbs/ft^3	3	4	8	18	25	30	40	ASTM D-1622
	kg/m^3	48	64	128	288	400	481	641	
Compressive Strength (75°F)	psi	40	75	220	740	1,300	1,700	3,600	ASTM D-1621
	kPa	280	520	1,500	5,100	8,950	11,700	24,800	
Tensile Strength	psi	40	70	180	500	850	1,100	1,900	ASTM D-1623 Type A Specimens
	kPa	280	480	1,250	3,450	5,850	7,600	13,100	
Shear Strength	psi	30	45	95	430	780	1,050	1,350	ASTM C273 in Compression * Modified sample size - 0.25"x1.0"x3.0"
	kPa	210	310	650	2,950	5,400	7,250	9,300	
Flexural Strength	psi	40	70	220	750	1,300	1,600	3,100	ASTM D-790 Method 1-A
	kPa	280	480	1,500	5,150	8,950	11,050	21,400	
Coefficient of Thermal Expansion (CTE)	in/in- °F	29 x 10^{-6}							From -50° to +200°F, GP Method
	m/m-K	52 x 10^{-6}							
Heat Release Peak	(kW/m^2)	PASS							FAR Part 25, Appendix F, Part IV
Heat Release Total	(kW-min/m^2)	PASS							FAR Part 25, Appendix F, Part IV
Smoke Density		PASS							FAR Part 25, Appendix F, Part V
Max Use Temperature	°F	280							
	°C	138							

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*Self extenguishing via test mothod shown below.
*FAR 25.853 (A) App. F(a)(1)(i) & (ii) tested vertically on 1/2" thickness specimen using 60 - and 12 - second ignition with a Busen burner.
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

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-3803 FST	28 (71)	48 (122)	96 (244)
FR-3804 FST	28 (71)	48 (122)	96 (244)
FR-3808 FST	24 (61)	48 (122)	96 (244)
FR-3818 FST	18 (46)	18 (46)	100 (254)
FR-3830 FST	12 (30)	24 (61)	96 (244)
FR-3840 FST	10 (25)	18 (46)	100 (254)

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