



LAST-A-FOAM® FR-3800 FST RIGID POLYURETHANE FOAM (English Units)

Property	Test Method	FR-3803 FST	FR-3804 FST	FR-3808 FST	FR-3818 FST	FR-3825 FST	FR-3830 FST	FR-3840 FST
Density (lb/ft <sup>3</sup> )	ASTM D-1622	3	4	8	18	25	30	40
<b>Compressive Strength (psi)</b>								
Parallel to Rise								
75°F	ASTM-D-1621	40	75	220	740	1,300	1,700	3,600
250°F		25	50	130	360	620	830	1,450
Perpendicular to Rise								
75°F	ASTM-D-1621	20	50	175	790	1,280	1,650	3,500
250°F		10	30	110	360	630	840	1,500
<b>Compressive Modulus (psi)</b>								
Parallel to Rise								
75°F	ASTM-D-1621	1,400	2,100	6,900	25,600	43,200	59,700	116,000
250°F		790	1,450	4,200	14,300	23,800	33,100	50,300
Perpendicular to Rise								
75°F	ASTM-D-1621	590	1,300	500	23,400	42,500	55,600	113,000
250°F		330	900	3,550	14,400	24,100	32,900	54,300
<b>Tensile Strength (psi)</b>								
Parallel to Rise	ASTM D-1623 Type A Specimens	40	70	180	500	850	1,100	1,900
Perpendicular to Rise		N/A	55	150	520	820	1,050	2,000
<b>Shear Strength (psi)</b>								
Parallel to Rise	ASTM C-273 in Compression *Modified sample size = 0.25" x 1" x 3"	30	45	95	430	780	1,050	1,350
<b>Shear Modulus (psi)</b>								
Parallel to Rise	ASTM C-273 in Compression *Modified sample size = 0.25" x 1" x 3"	300	650	1,100	5,750	8,500	11,500	13,400
<b>Flexural Strength (psi)</b>								
Rise Parallel to Test Span	ASTM D-790 Method 1-A	40	70	220	750	1,300	1,600	3,100
Rise Parallel to Beam Thick.		40	70	225	720	1,170	1,600	3,100
<b>Flexural Modulus (psi)</b>								
Rise Parallel to Test Span	ASTM D-790 Method 1-A	1,170	2,330	7,200	28,400	47,500	58,100	116,000
Rise Parallel to Beam Thick.		1,250	2,350	7,250	28,300	46,600	57,700	116,000
<b>Thermal Conductivity: (BTU·in/ft<sup>2</sup>·°F·h)</b>	ASTM C-518 at 75°F (24°C) mean temp.	0.230	0.220	0.245	0.350	0.453	0.539	0.665
<b>Hardness, Shore D (cut foam surface)</b>	ASTM D-2240	9	17	52	31	44	53	66
<b>Water Absorption (lb/ft<sup>2</sup>)</b>	ASTM D-2842	0.012	0.007	0.006	0.004	0.004	0.003	0.003
<b>Heat Release Peak</b>	FAR Part 25, Appendix F, Part IV	PASS						
<b>Heat Release Total</b>	FAR Part 25, Appendix F, Part IV	PASS						
<b>Smoke Density</b>	FAR Part 25, Appendix F, Part V	PASS						
<b>Toxicity</b>	FAR Part 25, Appendix F, Part V	PASS						
<b>Coefficient of Thermal Expansion: (in/in-°F)</b>	From -50°F to +200°F, GP Method	29 x 10 <sup>-6</sup>						
<b>Poisson's Ratio:</b>	Literature (Gibson & Ashby)	~ 0.3						
<b>Glass Transition Temperature, Tg (°F)</b>	ASTM E-1824	300						
<b>Max Use Temperature (°F)</b>		280						
<b>Fire Safety</b>	Self-extinguishing via FAR 25.853 (A) App. F (a)(1)(i) & (ii) tested vertically on 1/2" thick specimen using 12- and 60- second ignition with a Bunsen burner							

08/30/2019

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.

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