



LAST-A-FOAM® FR-3800 FST RIGID POLYURETHANE FOAM (Metric 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 (kg/m ³)	ASTM D-1622	48	64	128	288	400	481	641
Compressive Strength (kPa)								
Parallel to Rise								
24°C	ASTM-D-1621	280	520	1,500	5,100	8,950	11,700	24,800
71°C		170	340	900	2,500	4,250	5,700	10,000
Perpendicular to Rise								
24°C	ASTM-D-1621	140	340	1,200	5,450	8,850	11,400	24,100
71°C		70	210	750	2,500	4,350	5,800	10,300
Compressive Modulus (kPa)								
Parallel to Rise								
24°C	ASTM-D-1621	9,650	14,500	47,600	177,000	298,000	412,000	800,000
71°C		5,450	10,000	29,000	98,500	164,000	228,000	347,000
Perpendicular to Rise								
24°C	ASTM-D-1621	4,050	9,000	34,500	161,000	293,000	383,000	779,000
71°C		2,300	6,200	24,500	99,500	164,000	227,000	374,000
Tensile Strength (kPa)								
Parallel to Rise	ASTM D-1623 Type A Specimens	280	480	1,250	3,450	5,850	7,600	13,100
Perpendicular to Rise		N/A	380	1,050	3,600	5,650	7,250	13,800
Shear Strength (kPa)								
Parallel to Rise	ASTM C-273 in Compression *Modified sample size = 0.64cm x 2.54cm x 7.62cm	210	310	650	2,950	5,400	7,250	9,300
Shear Modulus (kPa)								
Parallel to Rise		11,400	17,600	28,600	154,000	207,000	296,000	390,000
Flexural Strength (kPa)								
Rise Parallel to Test Span	ASTM D-790 Method 1-A	280	480	1,500	5,150	8,950	11,050	21,400
Rise Parallel to Beam Thick.		280	480	1,550	4,950	8,050	11,050	21,400
Flexural Modulus (kPa)								
Rise Parallel to Test Span	ASTM D-790 Method 1-A	8,050	16,100	49,650	196,000	328,000	401,000	800,000
Rise Parallel to Beam Thick.		8,600	16,200	50,000	195,000	321,000	398,000	800,000
Thermal Conductivity: (W/m*K)	ASTM C-518 at 24°C mean temp.	0.033	0.032	0.035	0.050	0.065	0.078	0.096
Hardness, Shore D (cut foam surface)	ASTM D-2240	9	17	52	31	44	53	66
Water Absorption (kg/m²)	ASTM D-2842	0.059	0.032	0.028	0.020	0.020	0.015	0.015
Heat Release Peak (kW/m²)	FAR Part 25, Appendix F, Part IV	PASS						
Heat Release Total (kW min/m²)	FAR Part 25, Appendix F, Part IV	PASS						
Smoke Density	FAR Part 25, Appendix F, Part V	PASS						
Toxicity	FAR Part 25, Appendix F, Part V	PASS						
Coefficient of Thermal Expansion: (m/m-K)	From -46 to +93°C, GP Method	52 x 10 ⁻⁶						
Poisson's Ratio:	Literature (Gibson & Ashby)	~ 0.3						
Glass Transition Temperature, Tg (°C)	ASTM E-1824	149						
Max Use Temperature (°C)		138						
Fire Safety	Self-extinguishing via FAR 25.853 (A) App. F (a)(1)(i) & (ii) tested vertically on 1.27cm thick specimen using 12- and 60- second ignition with a Bunsen burner							

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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. 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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