GENERALPLASTICS MANUFACTURING COMPANY

LAST-A-FOAM® FR-7100 RIGID POLYURETHANE FOAM (English Units)

Property	Test Method	FR-7104	FR-7105	FR-7106	FR-7108	FR-7110	FR-7112	FR-7115	FR-7118	FR-7120	FR-7125	FR-7130	FR-7135	FR-7140
Density (lbs/ft^3)	ASTM D-1622	4	5	6	8	10	12	15	18	20	25	30	35	40
Compressive Strength (psi)														
Parallel to Rise														
75°F	ASTM-D-1621	110	130	150	240	315	400	510	660	1,060	1,760	2,370	3,350	4,220
200°F		45	60	80	125	170	210	270	440	580	930	1,190	1,700	2,130
Perpendicular to Rise														
75°F	ASTM-D-1621	75	130	170	240	305	380	500	550	1,010	1,690	2,230	3,300	4,260
200°F		40	70	90	135	175	220	290	320	530	890	1,130	1,700	2,190
Compressive Modulus (psi)														
Parallel to Rise														
75°F	ASTM-D-1621	2,350	3,600	4,250	7,450	10,050	12,500	16,300	34,600	37,300	61,400	90,500	99,500	114,000
200°F		1,600	2,350	2,850	4,800	6,450	8,100	10,600	16,900	19,800	32,600	34,900	55,000	55,000
Perpendicular to Rise														
75°F	ASTM-D-1621	1,900	3,750	5,300	7,200	9,300	11,800	15,300	16,400	28,200	47,200	63,200	91,000	116,000
200°F		1,300	2,400	3,450	4,850	6,250	8,100	10,500	12,700	15,900	25,000	33,200	42,500	52,000
Tensile Strength (psi)														
Parallel to Rise	ASTM D-1623 Type A Specimens	90	125	150	200	250	310	390	560	750	1,100	1,400	1,900	2,320
Perpendicular to Rise		90	125	160	200	240	290	360	440	710	1,050	1,260	1,900	2,480
Shear Strength (psi)														
Parallel to Rise	ASTM C-273 in Compression *Modified sample size = 0.25" x 1" x 3"	40	65	100	150	200	240	400	550	625	950	1,275	1,550	1,725
Shear Modulus (psi)														
Parallel to Rise	ASTM C-273 in Compression *Modified sample size = 0.25" x 1" x 3"	2,800	4,400	6,000	9,500	12,700	14,500	22,600	27,300	32,000	38,200	48,000	54,000	60,000
Flexural Strength (psi)														
Rise Parallel to Test Span	ASTM D-790 Method 1-A	100	150	170	300	400	500	660	750	1,020	1,550	1,940	2,700	3,400
Rise Parallel to Beam Thick.		100	150	170	300	410	510	670	690	990	1,550	1,950	2,800	3,500
Flexural Modulus (psi)														
Rise Parallel to Test Span	ASTM D-790 Method 1-A	3,050	4,850	6,200	9,100	11,600	14,700	19,000	22,300	33,200	55,400	71,800	103,000	130,000
Rise Parallel to Beam Thick.		3,050	4,850	6,200	9,050	11,500	14,600	18,800	21,900	33,200	55,100	70,700	102,000	130,000
Hardness, Shore-D (cut foam surface)	ASTM D-2240	3.5	5.5	7.5	11.6	15.7	19.7	25.8	31.9	36.0	46.1	56.3	66.4	77.0
Water Absorption (lb/ft^2)	ASTM D-2842	0.019	0.018	0.017	0.016	0.014	0.013	0.011	0.010	0.009	0.007	0.006	0.005	0.004
Thermal Conductivity: (BTU·in/ft^2·°F·h)	ASTM C-518 at 75°F (24°C) mean temp.	0.189	0.202	0.214	0.239	0.264	0.289	0.326	0.363	0.388	0.450	0.512	0.575	1.000
Coefficient of Thermal Expansion: (in/in-°F)	From -50 to +200°F, GP Method	31 x 10^{-6}												
Poisson's Ratio:	Literature (Gibson & Ashby)	~0.3												
Glass Transition Temperature, Tg (°F)	ASTM E-1824	240												
Max Use Temperature (°F)		220												
Fire Safety	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													

10/04/2018

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