



MATERIAL SPECIFICATIONS FOR:
 POLYDAMP® Melamine Foam
 w/Optional film facings and PSA
 (PMF-XXX-YY)

PMF-100-RAF

*Melamine foam with reinforced aluminum facing
 (Testing was performed on the polyurethane facing)*

Description:

POLYDAMP® Melamine Foam (PMF) is an extremely light weight material which exhibits exceptional resistance to heat, low flame propagation and smoke. It does not drip in the presence of a flame and stops burning after removal of any external ignition source and fuel. It is recommended for both acoustical and thermal insulation in aircraft, aerospace, industrial, marine or architectural applications where high heat resistance, low flame spread and smoke are requirements

PMF is available with film facings and adhesive backings.

Typical Foam Characteristics:

Density:	ASTM D-3574-86	0.59 lb/ft ³ , ±15%
Tensile Strength:	ASTM D-3574-86	17.4 lb/in ² min.
Tear Strength:	ASTM D-3574-86	3.8 lb/in ² min.
Elongation:	ASTM D-3574-86	10% min.
Compression Set :	ASTM D-3574-86	@50% = 6.2%, @75% = 8.5%
Thermal Conductivity:	ASTM C-177 & C-518	0.25 BTU in./hr ft ² °F @ 68°F
Continuous Temperature Range:		-300°F TO 300°F
Intermittent Temperature Range:		375°F

Flammability Ratings:

<u>Standard</u>	<u>Test</u>	<u>Rating</u>
UL 94 HF-1	Horizontal Burning	LISTED
UL 94 V-0	Vertical Burning	LISTED
UL 94-5 V	Vertical Burning	PASS
FAR 25.853 (a), App F, Part1, (a)(1)(i)	Vertical Burn Test	PASS
FAR 25.856 (BSS7365)	Radiant Panel Test	After Flame: 0 Seconds Flame Propagation: 0 Seconds
ASTM E 662	Specific Optical Density of smoke generated by Solid material	Flaming: Ds (1.5 min) = 64 Ds (4.0 min) = 88 Non-Flaming: Ds (1.5 min) = 23 Ds (4.0 min) = 38
ASTM E 84	Steiner Tunnel, 1 inch thick	Flame Spread 5 Smoke Developed 35

ASTM E 162	Surface Flammability of Materials using a radiant Heat Energy Source	Flame Spread factor 2.25 Heat Evolution factor 2.17 Flame Spread index 4.62
BSS7239	Toxicity Requirements for Smoke Gases	PASS
BS 476, part 6 & 7	Flame and Smoke Propagation	Class 0

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(PMF-XXX-YY)

Facings:

Color: BU = Black Urethane, NU = Bone Urethane, GUF/BUF = Gray or Black Urethane with fire retardants.

Thickness: 3 and 3.5 mils

Description: Polyurethane film is a tough abrasion resistant film surface that resists punctures and tears. Polyurethane film also exhibits good resistance to chemicals and moisture. The standard colors are black and gray, however, other colors are available.

Other Films available are: Metalized Polyester 0.001", Tedlar,®0.001", Nomex-0.002", and Alum. Foil 0.002", PEN 0.001", Kapton 0.001", Reinforced Aluminum Foil 0.003"

Acoustical Properties:

Without/With 0.001" polyurethane film facing:

Foam Thickness:	<u>125</u>	<u>250</u>	<u>500</u>	<u>1K</u>	<u>2K</u>	<u>4K</u>	<u>N.R.C.*</u>
0.25 in.	4/10	5/16	10/18	20/50	39/50	81/77	20/35
0.50 in.	11/16	12/21	25/40	42/78	77/80	94/78	40/55
1.0 in.	18/23	23/38	50/64	82/98	96/82	99/80	65/70
2.0 in.	31/40	60/80	75/91	90/100	100/100	100/98	80/95
3.0 in.	42/45	67/86	81/98	96/100	100/100	100/100	85/95
4.0 in.	53/50	80/92	90/100	99/100	100/100	100/100	90/100

Adhesive Backings:

Type: Acrylic

Temperature Range: -65°F to 425°F

Shelf Life: One (1) year when stored in a cool dry place between 60°F & 80°F, and 30% to 50% relative humidity

*N.R.C. = Arithmetic average of values @ 250,500,1000,2000 Hz, rounded to the nearest 5.