

**PRODUCT: VBPF-X91-X1-RA-00 REV071023NT**

**PRODUCT DESCRIPTION:** PVC barrier with acoustic polyester fiber absorber, 0.25-inch polyester foam decoupler layer, and reinforced aluminum foil facing.

### FACING

Physical Property	Description - Value	Test Method
Material	Foil – Aluminum Reinforcement – Bi-directional 150/0 Fiberglass	
Basis Weight	23.1 lb/ft <sup>2</sup> (1106 N/m <sup>2</sup> ) +/- 10%	Scale
Total Thickness	7.8 mil (0.198 mm) +/- 10%	Micrometer
Foil Thickness	1 mil (0.254 mm) +/- 10%	
Reinforcement	5/in (20/100mm) (Machine or Cross Direction)	
Mullen Burst	45 psi (310 kPa)	ASTM D 774
Tensile Strength	40 lb/in width (7.0 kN/m width) Machine or Cross Direction	ASTM C 1136
Low Temperature Resistance	Remains Flexible with No Delamination @ -40 °F (-40 °C)	ASTM C 1263
High Temperature Resistance	Remains Flexible with No Delamination	10 min @ 401 °F (205 °C)
Water Immersion	No Delamination	48 hours @ 73 °F (23 °C)
Emissivity (Foil Side)	<= 0.05	ASTM E 408
Flammability	Self-Extinguishing	FMVSS 302-98

Physical Properties based upon statistical averages.

### ABSORBER

Physical Property	Description - Value
Material	Proprietary fire-resistant fiber blend
Color	Grey
Areal Weight @ 1 in thick	0.143 lb/ft <sup>2</sup> (22.5 N/m <sup>2</sup> ) +/- 10%
Service Temperature	-40 to 350 °F (-40 to 177 °C)
Flammability	Passes FMVSS 302, UL HBF UL 94 HF-1 Listed
Glow Wire Ignition temp	1292 °F (700 °C)
Glow Wire Flam. Index	1382 °F (750 °C)

### BARRIER

Physical Property	Description – Value
Material	Flexible Polyvinylchloride (PVC vinyl)
Color	Charcoal Gray
Specific Gravity	112 lb/ft <sup>3</sup> (1800 kg/m <sup>3</sup> )
Weight Range	0.5 to 2.0 lb/ft <sup>2</sup> (2.4 to 9.8 kg/m <sup>2</sup> ) +/- 10%
Flammability	FMVSS 302
Service Temperature	-40 to 220 °F (-40 to 104 °C)
Chemical Resistance	Excellent for most acids, mild alkalis, oils, and grease

## DECOUPLER

Physical Property	Description - Value	
Material	Polyester Polyurethane Foam	
Color	Charcoal	
Available Thicknesses	0.125 in (3.18 mm) - 4.0 in (102 mm)	
Density	2.00 lb/ft <sup>3</sup> (314 N/m <sup>3</sup> ) +/- 0.10%	
	<b>Minimum</b>	<b>Average</b>
Tensile Strength	18.0 psi (124 kPa)	25.0 psi (172 kPa)
Elongation	170%	220%
Tear Resistance	2.00 lb/in (3.50 N/cm)	2.50 lb/in (4.37 N/cm)
Compression Force Deflection 25% Deflection	0.40 psi (2.8 kPa)	0.50 psi (3.4 kPa)
Compression Force Deflection 50% Deflection	0.45 psi (3.1 kPa)	0.60 psi (4.1 kPa)
Compression Set @ 50%	8% maximum	
Retention of Tensile Strength after 3 hours, 105°C, Steam Autoclave	70% minimum	
Retention of Tensile Strength after 22 hours, 140°C, Dry Heat Aging	70% minimum	
Pores per inch	55 +/- 5	
Flammability	FMVSS 302, UL 94 HF-1	

Test Methods: ASTM-D3574-[latest revision]. Standard Methods of Testing Flexible Cellular Materials – Slab, Bonded, and Molded Urethane Foam.

## ACOUSTIC PROPERTIES

### Transmission Loss and STC to ASTM E 90 and E 413

For 1 lb/ft<sup>2</sup> Barrier ONLY

Frequency (f) [Hz]	125	250	500	1000	2000	4000	STC
Transmission Loss (TL) [dB]	17	19	24	29	34	40	28

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