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SURFACES INC.

Soundproofing | Acoustics | Noise & Vibration Control

Sound Silencer Acoustical Panels

Material Physical Properties for ASTM E-84 Fire Retardant (FR) PEPP
Molded from Porous Expanded Polypropylene Beads (PEPP)

PHYSICAL PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Density	ASTM-D3575	pcf (g/l)	2.8 (45)
Porosity ¹	JPSI Internal	%	30
Compressive Strength @25% Strain @50% Strain @75% Strain	ASTM-D3575	psi psi ps	23.0 35.0 79.0
Compression Set	ASTM-D3575	%	9.0
Tensile Strength	ASTM-D3575	psi	27.0
Tensile Elongation	ASTM-D3575	%	13.0
Tear Strength	ASTM-D3575	lbs/inch	18.8
Thermal Conductivity	ASTM-C177 @ 75°F	(K) BTU-in/(ft ² -hr-°F)	0.26
Thermal Stability Linear Dimensional Change	ASTM-D3575 24 hrs @ 225°F	%	< 1.0%
Thermal Resistance	ASTM-C177	(R)	3.8
Coefficient of Linear Thermal Expansion 70°F to -40°F 70°F to -180°F	ASTM-D696	in/in/°F x 10 ⁻⁵ in/in/°F x 10 ⁻⁵	6.4 10.8
Water Vapor Permeability	ASTM-E96	lbs.ft ² /hrmmHg	6.6 x10 ⁻⁵
Water Absorption	ASTM-C272	lbs/in ³ x 10 ⁻³	6.5
Flammability	FMVSS-302 ASTM-E84 ASTM-E84 UL-94	< 4.0 in/min. Flame Spread Index ² Smoke Development Index ² Flame Class ³	Pass 3 (1" Thick) 5 (2" Thick) 84 (1" Thick) 113 (2" Thick) V-2
Chemical Resistance (Auto fuels, fluids, solvents)	Various	1 hr exposure	Pass

Notes: Above values shown are typical for Fire Retardant (FR) PEPP Sound Silencer Panels.

¹ Porosity of 30% (Min.) based on a molded compression ratio of @ 10%

² Testing performed on Black PEPP. Sound Silencer FR PEPP is a Class 1A product (per NFPA No. 101)

³ Flame Class Equivalent

pcf = pounds/cubic foot, g/l = grams/liter

TBD = To be determined (Testing in progress)

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