POROUS ARPRO Expanded Polypropylene (PEPP)

Material Physical Properties
ARPRO® Porous Expanded Polypropylene (PEPP)

PHYSICAL PROPERTY	TEST METHOD	UNITS	TEST RESULTS		
Density	ASTM-D3575	pcf (g/l)	1.9 (30)	2.8 (45)	3.7 (60)
Porosity[1]	JSP Internal	%	~ 25 to 30	~ 25 to 30	~ 25 to 30
Compressive Strength	ASTM-D3575				
@25% Strain		psi	12.0	23.0	33.0
@50% Strain		psi	21.0	35.0	50.0
@75% Strain		psi	55.0	79.0	115.0
Compression Set	ASTM-D3575	%	9.0	9.0	9.0
Tensile Strength	ASTM-D3575	psi	22.0	28.0	38.0
Tensile Elongation	ASTM-D3575	%	14.0	13.0	12.0
Tear Strength	ASTM-D3575	lbs/inch	10.0	12.0	15.0
Thermal Conductivity	ASTM-C177 @ 75°F	(K) BTU-in/(ft^2-hr-°F)	0.28	0.28	0.29
Thermal Stability Linear Dimensional Change	ASTM-D3575 24 hrs @ 225°F	%	< 1.0%	< 1.0%	< 1.0%
Thermal Resistance	ASTM-C177	(R)	3.5	3.5	3.4
Coefficient of Linear Thermal Expansion	ASTM-D696				
70°F to -40°F		in/in/°F x 10^{-5}	7.5	6.4	5.0
70°F to 180°F		in/in/°F x 10^{-5}	11.5	10.8	9.7
Water Vapor Permeability[1]	ASTM-E96	lbs/ft^2/hr/mmHg	7.5 x 10^{-5}	6.6 x 10^{-5}	5.9 x 10^{-5}
Water Absorption	ASTM-C272	lbs/in^3 x 10^{-3}	7.2	6.5	5.3
Flammability	FMVSS-302	< 4.0 in/min.	Pass	Pass	Pass
Chemical Resistance (Auto fuels, fluids, solvents)	Various	1 hr exposure	Pass	Pass	Pass

Notes: [1]Porosity of 25% based on a molded compression ratio of ~ 10 to 15%.
Molding conditions and part design will effect part density, porosity and permeability propeties.
Above values shown are typical for standard PEPP.
Material is available in Black Color (9500 Series)
pcf = pounds/cubic foot, g/l = grams/liter

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