Expanded Polypropylene (EPP)

MATERIAL PHYSICAL PROPERTIES FOR FOAM (DENSITY RANGE FROM 20g/l to 90g/l)									
PHYSICAL PROPERTY	**TEST METHOD**	**UNITS**	**TEST RESULTS**						
Density	ASTM-D3575	grams/lier	20	30	45	60	67	82	90
Compressive Strength @25% STRAIN @50% STRAIN @75% STRAIN	ASTM-D3575	Mpa	 0.10 0.16 0.31	 0.16 0.23 0.44	 0.28 0.37 0.76	 0.39 0.50 1.07	 0.45 0.59 1.26	 0.60 0.80 1.78	 0.69 0.93 2.08
Compression Set	ASTM-D3575	%	14	12	12	11	11	10	10
Tensile Strength	ASTM-D3575	MPa	0.26	0.38	0.46	0.62	0.71	0.87	0.97
Tensile Elogation	ASTM-D3575	%	15	15	14	14	13	13	12
Tear Strength	ASTM-D3575	KN/m	1.74	2.13	2.73	3.25	3.51	4.07	4.35
Flexural Strength	ASTM-D790	MPa	0.21	0.38	0.54	0.72	0.86	1.08	1.16
Flexural Modulus		MPa	9.8	11.6	14.5	19	22.2	28.9	31.1
Coefficient of Linear Thermal Expansion 20°C to -40°C 20° C to 80°C	ASTM-D696	$mm/mm/°C \times 10^{-5}$	 6.8 10.8	 5.9 10.2	 5.5 9.8	 4.3 8.7	 4.1 7.9	 3.9 7.5	 3.7 6.8
WATER ABSORPTION	ASTM-C272	$gms/cc \times 10^{-3}$	10.4	8.1	6.2	5.1	4.5	4.2	3.5
Flammability	FMVSS 302	<100 mm/min.	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Chemical Resistance (Auto fuels, fluids, solvents)	Various	1 hr exposure	Pass	Pass	Pass	Pass	Pass	Pass	Pass