



## Material Physical Property Comparison ARPAK® Expanded Polyethylene (EPE) vs. Zotefoams Plastazote LD

Physical Properties†	Test Method	Units	JSP ARPAK® EPE			Zotefoams Plastazote LD		
Density (Grade)	ASTM-D3575	Type	1.3	1.5	1.9	LD24	LD33	LD45
Density	ASTM-D3575	g/l or kg/m³	20	24	30	24	33	45
Compressive Strength @10%	ASTM-D3575	KPa	48.3	58.6	68.9	32	51	69
Compressive Strength @25%		KPa	68.9	75.8	89.6	51	68	86
Compressive Strength @50%		KPa	124	131	152	83	102	121
Compressive Strength @75%		KPa	303	338	386	115	137	159
Tensile Strength	ASTM-D3575	KPa	276	310	359	240	380	435
Tensile Elongation	ASTM-D3575	%	40	38	35	115	150	180
Tear Strength	ASTM-D3575	KN/m	2.4	2.8	2.9	1.4	1.8	2.2
Compressive Set @25%/22hr	ASTM-D3575	% +0.5 hr	7	9	9	13	10	9
Buoyancy	ASTM-D3575	kg/m³	971	953	953	NA	NA	NA
Thermal Conductivity	ASTM-C177	(K) W/m·°C	0.036	0.037	0.037	0.035	0.039	0.040
Thermal Resistance	ASTM-C177	(R) @22°C	4.1	4.0	4.0	4.2	3.7	3.6
Coef. Of Lin. Thermal Expan	ASTM-D696	mm/mm/°C x 10 <sup>-5</sup>	14.6	12.8	11.0	NA	NA	NA
Service Temperature	ASTM-D3575	°C (MAX)	80	80	80	90	90	90
Thermal Cycling Dim Change	ASTM-D3575	-40°C to +85°C	<5%	<5%	<5%	<5%	<5%	<5%
Long Term Storage (Ambt)	(w/o Sun Exp)	22 ± 3°C	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Water Absorption	ASTM-D3575	g/cc	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Compressive Creep	ASTM-D3575	1000hr, % (KPa)	2.8 (7)	3.0 (7)	3.3 (7)	NA	NA	NA
Flammability	FMVSS-302	<4.0 in/min	Pass	Pass	Pass	Pass	Pass	Pass
Odor	VDA 270	3 MAX	Pass	Pass	Pass	Pass	Pass	Pass
Fogging	SAE J1756	< 1 mg (85 MIN)	Pass	Pass	Pass	Pass	Pass	Pass
Chemical Resistance	Various	1 hr exposure (solvents, acids, and alkalines)	Pass	Pass	Pass	Pass	Pass	Pass
Fuel Immersion	Coast Guard; Fuel B per 33 CFR §183.114	<5% (chg in vol)	Pass	Pass	Pass	NA	NA	NA
End of Life Directive / RoHS	No Heavy Metals, BDE's per 2002/9/EC & 2002/95/EC	<5% (chg in vol)	Pass	Pass	Pass	Pass	Pass	Pass

†Note: The data presented for the JSP ARPAK Expanded Polyethylene (EPE) are for standard JSP ARPLANK Products.

While values shown are typical of the product, they should not be construed as specification limits. (NA = Not Available)

ARPAK® Expanded Polyethylene (EPE) is a highly resilient closed-cell expanded bead foam product. It is ideally suited as an energy absorbing cushioning material for products requiring shock absorption, vibration dampening, buoyancy, insulation, and chemical resistance. It withstands multiple impacts without damage, is very light-weight and non-abrasive. It is also multi-directional in nature, so unlike traditional extruded foams, which yield different properties along the extrusion, vertical and horizontal axes, the properties of ARPAK® EPE are the same regardless of orientation. These properties make ARPAK® EPE an ideal and versatile product for protective packaging in a variety of applications.