

ARCEL[®] Resin Cushioning Comparisons

The additional stiffness of molded ARCEL resin, compared to some other resilient foams, has often allowed the package designer to specify lower density molded ARCEL resin as a means of reducing package weight and cost while maintaining cushion performance. As molded densities become lower however, many might expect the advantages of ARCEL resin to diminish. In many instances this is not the case. Over the past several years molded ARCEL foam packages have been drop tested along side identical packages molded from EPP. The tables below detail the cushioning performance of molded ARCEL resin and EPP in two packaging applications at virtually identical molded densities. Data were generated using an independent testing lab.

30-inch (76-cm) Drop Height
Foam Density 1.3 pcf (21 g/l)
Data recorded in G's
Filtered @250Hz

Electronics Pack #1	Unit weight	Top	Bottom	Front	Back	Right	Left
Molded EPP	31 lbs. (14 kg)	42.22	33.89	34.33	37.73	50.3	43.51
Molded ARCEL resin	31 lbs. (14 kg)	23.59	23.02	28.09	26.68	32.31	31.88

36-inch (91-cm) Drop Height
Foam Density 1.3 pcf (21 g/l)
Data recorded in G's
Filtered @250Hz

Electronics Pack #2	Unit weight	Top	Bottom	Front	Back	Right	Left
Molded EPP	34 lbs. (15.5 kg)	44.03	44.85	35.6	39.42	32.43	60.84
Molded ARCEL resin	34 lbs. (15.5 kg)	49.25	45.29	32.2	32.96	36.44	52.78

As the independent data show, properly designed low density ARCEL resin delivers excellent cushion packaging performance. Combine excellent cushioning characteristics with less expensive tooling, reduced energy consumption, no pre or post treatment, and you have the basis for a very cost-effective high-end package.

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