

Expanded Polypropylene (EPP) Foam Typical Material Tolerances for Molded Product

Mass	Tolerance / Density					
Part Weight	16 to 24 g/l	25 to 32 g/l	33 to 50 g/l	51 to 80 g/l	81 to 120 g/l	> 121 g/l ³
0 to 5 grams	- 1.0 gram MIN ¹	- 1.0 gram MIN ¹	- 1.0 gram MIN ¹	NR	NR	NR
6 to 15 grams	± 3.5 grams	± 3.0 grams	± 3.0 grams	± 2.5 grams	± 2.5 grams	NR
16 to 25 grams	± 4.5 grams	± 4.0 grams	± 4.0 grams	± 3.5 grams	± 3.5 grams	± 3.5 grams
26 to 50 grams	± 5.5 grams	± 5.0 grams	± 5.0 grams	± 4.5 grams	± 4.5 grams	± 4.5 grams
51 to 100 grams	± 10.0 grams	± 9.0 grams	± 9.0 grams	± 8.5 grams	± 8.5 grams	± 8.5 grams
101 to 250 grams	± 25.0 grams	± 22.0 grams	± 20.0 grams	± 20.0 grams	± 20.0 grams	± 20.0 grams
251 to 500 grams	± 50.0 grams	± 45.0 grams	± 42.5 grams	± 40.0 grams	± 40.0 grams	± 40.0 grams
501 to 1000 grams	± 95.0 grams	± 90.0 grams	± 85.0 grams	± 80.0 grams	± 80.0 grams	± 80.0 grams
Greater than 1000 grams ²	± 10%	± 9.5%	± 9.0%	± 8.5%	± 8.5%	± 8.0%

NR = Not Recommended

¹Note: -1.0 gram from Nominal MIN weight (no MAX) is recommended.

²Note: A bilateral tolerance is also acceptable. (i.e. ±10% or -5%/+15%)

³Note: When using 54XX Series High Density Material (5470 and higher)

Molded EPP weight tolerances vary depending on net part weight. Molded EPP processing dictates that both a 'wet' weight (measured immediately upon part ejection from the molding press) and a 'dry' weight (finished weight after curing and drying) are used to control density. The 'dry' or finished weight is ultimately what determines part compliance. Typical tolerances are shown in the table. These are general guidelines. In the case of tolerances on the density borderline (i.e. 33 g/l), defer to the MIN density based on the total tolerance (i.e. if part is 33 g/l ±10%, use 30 g/l as the density in the table). Consult a JSP representative to discuss the optimal EPP weight and density tolerances for each specific application.