



Porous Expanded Polypropylene (PEPP) Foam Typical Material Tolerances For Molded Product

Dimensions	Tolerance / Density		
Linear Dimensions ¹	~ 30 g/l (1.9 pcf or 30X)	~ 45 g/l (2.8 pcf or 20X)	~ 60 g/l (3.7 pcf or 15X)
0 to 15 mm	± 1.0 mm	± 1.0 mm	± 1.0 mm
16 to 25 mm	± 2.0 mm	± 2.0 mm	± 1.5 mm
26 to 50 mm	± 2.5 mm	± 2.5 mm	± 2.0 mm
51 to 100 mm	± 2.5 mm	± 2.5 mm	± 2.0 mm
101 to 250 mm	± 3.0 mm	± 3.0 mm	± 2.5 mm
251 to 500 mm	± 4.0 mm	± 3.5 mm	± 3.0 mm
501 to 750 mm	± 5.5 mm	± 5.0 mm	± 4.5 mm
751 to 1000 mm	± 7.0 mm	± 6.5 mm	± 5.5 mm
greater than 1000 mm	± 0.0070 mm/mm	± 0.0065 mm/mm	± 0.0055 mm/mm
Surface Profile (GD&T) ²	7.0	6.0	5.0
Hole/Slot Dimensions (MMC)	~ 30 g/l (1.9 pcf or 30X)	~ 45 g/l (2.8 pcf or 20X)	~ 60 g/l (3.7 pcf or 15X)
< 10 mm	± 1.2 mm	± 1.0 mm	± 0.75 mm
11 to 25 mm	± 1.5 mm	± 1.2 mm	± 1.0 mm
26 to 50 mm	± 2.0 mm	± 1.5 mm	± 1.2 mm

¹Note: per ASME Y14.5 (Geometric Dimensioning and Tolerancing).

²Note: In cases where part geometries and resulting dimensions are skewed or bilateral, or where the primary datum structure varies across different linear dimensions, the tolerance recommendations listed above may not be appropriate and specific tolerances will need to be negotiated with the respective design responsible party.

Key: g/l = grams per liter (also kg/m³) pcf = pounds per cubic foot or lb/ft³
 X = Expansion Ratio or 'Times' mm = millimeter

Molded PEPP dimensional tolerances vary depending on part datum structure. The ability to achieve tighter tolerances with PEPP parts is possible, and requires consideration of density, material grade, number of cavities, press/platen size, molding technique, datum locations, inspection fixture design, and inspection environment (temperature, etc.). Typical tolerances are shown in the table. These are general guidelines. Consult JSP to discuss optimal PEPP dimensional tolerances for specific applications.

