Device Material Content

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Package: **272 PBGA** **with SnPb Solder Balls**

Total Device Weight **2.78** **Grams**

MSL: 3
Peak Reflow Temp: 225°C

February, 2004	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	1.27%	0.035			Silicon	7440-21-3	Die size: 7.0 x 7.0 mm
Mold	48.27%	1.342					Mold Compound composition:
			36.80%	1.023	Silica Fused	60676-86-0	65 to 95% Silica Fused (LSC uses 76.25% in our calculation)
			0.24%	0.007	Silica Quartz	7631-86-9	0 to 1% Silica Quartz (LSC uses 0.5% in our calculation)
			0.24%	0.007	Silica Cristobalite	14464-46-1	0 to 1% Silica Cristobalite(LSC uses 0.5% in our calculation)
			6.03%	0.168	Epoxy resin	129915-35-1	0 to 20% Epoxy resin (LSC uses 12.5% in our calculation)
			1.45%	0.040	Phenolic resin	26834-02-6	0 to 20% Phenolic resin (LSC uses 3% in our calculation)
			1.45%	0.040	Brominated resin	68928-70-1	0 to 20% Brominated resin (LSC uses 3% in our calculation)
			0.48%	0.013	Antimony Pentoxide	1314-60-9	0.5 to 1.5% Antimony Pentoxide (LSC uses 1% in our calculation)
			0.12%	0.003	Antimony Trioxide	1309-64-4	0.1 to 0.5% Antimony Trioxide (LSC uses 0.25% in our calculation)
			1.21%	0.034	Mixed siloxanes	-	1 to 5% Mixed siloxanes (LSC uses 2.5% in our calculation)
			0.24%	0.007	Carbon Black	1333-86-4	0.1 to 1% Carbon black (LSC uses 0.5% in our calculation)
							Mold Compound Density between 1.88 and 2.1 grams/cc
D/A Epoxy	0.18%	0.005			Silver-filled epoxy	7440-22-4	Die attach epoxy Density: 4 grams/cc
Wire	0.29%	0.008			Gold (Au)	7440-57-5	1.00 mil diameter; 1 wire per package lead; wire length 3 mm
Solder Balls	19.79%	0.550					
			10.36%	0.288	Tin (Sn)	7440-31-5	Solder ball composition Sn63/Pb37
			9.44%	0.262	Lead (Pb)	7439-92-1	
Substrate	21.92%	0.609			BT Resin	-	
Foil	8.28%	0.230			Copper (Cu)	7440-50-8	

Notes:

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.

Constituent substances and proportions in epoxy materials are before curing.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

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