



## Device Material Content

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**Package: 64 TQFP (1.4mm) with SnPb Plating**  
**Total Device Weight 0.34 Grams**

MSL: 3  
Peak Reflow Temp: 240°C

August, 2008	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
<b>Die</b>	2.07%	0.007			Silicon chip	7440-21-3	Die size: 2.8 x 3.0 mm
<b>Mold</b>	75.12%	0.255	63.85%	0.217	Silica Fused	60676-86-0	Mold Compound Density between 1.7 and 2.1 grams/cc 80 to 90% Silica Fused (LSC uses 85% in our calculation) 3 to 10% Epoxy Resin (LSC uses 5% in our calculation). 2 to 10% Phenol Resin (LSC uses 5% in our calculation). 0.1 to 1% Antimony Trioxide (LSC uses 0.6% in our calculation) 0.1 to 1% Carbon black (LSC uses 0.6% in our calculation) 0 to 5% Other (LSC uses 3.8% in our calculation)
			3.76%	0.013	Epoxy Resin	-	
			3.76%	0.013	Phenol Resin	-	
			0.45%	0.002	Antimony Trioxide	1309-64-4	
			0.45%	0.002	Carbon black	1333-86-4	
			2.85%	0.010	Other (trade secret)	-	
<b>D/A Epoxy</b>	0.25%	0.0009	0.20%	0.0007	Silver-filled epoxy	7440-22-4	Die attach epoxy Density: 4 grams/cc (silver content: 70-90%; LSC uses 80% in our calculation).
			0.05%	0.0002	Silver (Ag) other	-	
<b>Wire</b>	0.55%	0.002			Gold (Au)	7440-57-5	1.00 mil diameter; 1 wire per package lead; wire length 3 mm
<b>Lead Plating</b>	3.24%	0.011	2.76%	0.009	Tin (Sn)	7440-31-5	Plating is 85% Sn, 15% Pb; thickness is 0.015mm
			0.49%	0.002	Lead (Pb)	7439-92-1	
<b>Leadframe</b>	18.76%	0.064	18.29%	0.0622	Copper (Cu)	7440-50-8	Leadframe thickness is nominal (per Case Outline) Cu (LSC uses 97.5% in our calculation) 0 to 0.65% Si (LSC uses 0.4% in our calculation) 0 to 0.2% Zn (LSC uses 0.1% in our calculation) 0 to 0.25% Sn (LSC uses 0.2% in our calculation) 0 to 0.3% Cr (LSC uses 0.2% in our calculation) 0 to 3% Ni (LSC uses 1.5% in our calculation) 0 to 0.15% Mg (LSC uses 0.1% in our calculation)
			0.08%	0.00026	Silicon (Si)	7440-21-3	
			0.02%	0.00006	Zinc (Zn)	7440-66-6	
			0.04%	0.00013	Tin (Sn)	7440-31-5	
			0.04%	0.00013	Chromium (Cr)	7440-47-3	
			0.28%	0.0010	Nickel (Ni)	7440-02-0	
			0.02%	0.00006	Magnesium (Mg)	7439-95-4	

**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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