Device Material Content

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Package: 44 TQFP (1.0mm) with SnPb Plating
Total Device Weight 0.28 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:
Die	1.52%	0.004			Silicon chip	7440-21-3	Die size: 2.1 x 3.0 mm
Mold	72.29%	0.202					Mold Compound Density between 1.7 and 2.1 grams/cc
			61.44%	0.172	Silica Fused	60676-86-0	80 to 90% Silica Fused (LSC uses 85% in our calculation)
			3.61%	0.010	Epoxy Resin	-	3 to 10% Epoxy Resin (LSC uses 5% in our calculation).
			3.61%	0.010	Phenol Resin	-	2 to 10% Phenol Resin (LSC uses 5% in our calculation).
			0.43%	0.0012	Antimony Trioxide	1309-64-4	0.1 to 1% Antimony Trioxide (LSC uses 0.6% in our calculation)
			0.43%	0.0012	Carbon black	1333-86-4	0.1 to 1% Carbon black (LSC uses 0.6% in our calculation)
			2.75%	0.008	Other (trade secret)	-	0 to 5% Other (LSC uses 3.8% in our calculation)
D/A Epoxy	0.23%	0.001			Silver-filled epoxy		
			0.18%	0.0010	Silver (Ag)	7440-22-4	Die attach epoxy Density: 4 grams/cc
			0.05%	0.0001	other	-	(silver content: 70-90%; LSC uses 80% in our calculation)
Wire	0.46%	0.0013			Gold (Au)	7440-57-5	0.8 to1.0 mil diameter; 1 wire per package lead; wire length 3 mm
Lead Plating	2.72%	0.008					
			2.32%	0.006	Tin (Sn)	7440-31-5	Plating is 85% Sn, 15% Pb; thickness is 0.015mm
			0.41%	0.0011	Lead (Pb)	7439-92-1	
Leadframe	22.78%	0.064					Leadframe thickness is nominal (per Case Outline)
			22.21%	0.062	Copper (Cu)	7440-50-8	Cu (LSC uses 97.5% in our calculation)
			0.09%	0.00026	Silicon (Si)	7440-21-3	0 to 0.65% Si (LSC uses 0.4% in our calculation)
			0.02%	0.00006	Zinc (Zn)	7440-66-6	0 to 0.2% Zn (LSC uses 0.1% in our calculation)
			0.05%	0.00013	Tin (Sn)	7440-31-5	0 to 0.25% Sn (LSC uses 0.2% in our calculation)
			0.05%	0.00013	Chromium (Cr)	7440-47-3	0 to 0.3% Cr (LSC uses 0.2% in our calculation)
			0.34%	0.0010	Nickel (Ni)	7440-02-0	0 to 3% Ni (LSC uses 1.5% in our calculation)
			0.02%	0.00006	Magnesium (Mg)	7439-95-4	0 to 0.15% Mg (LSC uses 0.1% in our calculation)

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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