Device Material Content

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Package: **144 TQFP (1.4mm)** **with matte Sn Plating**

Total Device Weight **1.40** **Grams**

Halogen Free
MSL: 3
Peak Reflow Temp: 260°C

November, 2010	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	1.21%	0.017			Silicon chip	7440-21-3	Die size: 4.00 x 5.05 mm
Mold	79.42%	1.112					Mold Compound Density between 1.7 and 2.1 grams/cc
			67.51%	0.945	Silica Fused	60676-86-0	75 to 95% (LSC uses 85% in our calculation)
			4.77%	0.067	Epoxy Resin	-	3 to 10% (LSC uses 6% in our calculation)
			3.97%	0.056	Phenol Resin	-	2 to 8% (LSC uses 5% in our calculation)
			0.32%	0.0044	Carbon black	1333-86-4	0.1 to 0.5% (LSC uses 0.4% in our calculation)
			2.86%	0.040	Other (trade secret)	-	0 to 5% (LSC uses 3.6% in our calculation)
D/A Epoxy	0.15%	0.0021					
			0.12%	0.0016	Silver (Ag)	7440-22-4	(silver content: 70-90%; LSC uses 80% in our calculation)
			0.03%	0.0004	Esters & resins	-	Die attach epoxy Density: 4 grams/cc
Wire	0.21%	0.0029			Gold (Au)	7440-57-5	0.8 to 1.0 mil diameter; 1 wire per package lead; wire length 3 mm
Lead Plating	0.79%	0.011			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is 0.015mm
Leadframe	18.22%	0.255					Leadframe thickness is nominal (per Case Outline)
			17.53%	0.245	Copper (Cu)	7440-50-8	96.2% Cu
			0.55%	0.0077	Nickel (Ni)	7440-02-0	3% Ni
			0.12%	0.0017	Silicon (Si)	7440-21-3	0.65% Si
			0.03%	0.0004	Magnesium (Mg)	7439-95-4	0.15% Mg

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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