Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@lscc.com

Package: 44 TQFP (1.0mm) with matte Sn Plating
Total Device Weight 0.28 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	1.52%	0.004			Silicon chip	7440-21-3	Die size: 2.1 x 3.0 mm
Mold	72.31%	0.202					Mold Compound Density between 1.7 and 2.1 grams/cc
			61.46%	0.172	Silica Fused	60676-86-0	75 to 95% (LSC uses 85% in our calculation)
			4.34%	0.012	Epoxy Resin	-	3 to 10% (LSC uses 6% in our calculation)
			3.62%	0.010	Phenol Resin	-	2 to 8% (LSC uses 5% in our calculation)
			0.29%	0.0008	Carbon black	1333-86-4	0.1 to 0.5% (LSC uses 0.4% in our calculation)
			2.60%	0.007	Other (trade secret)	-	0 to 5% (LSC uses 3.6% in our calculation)
D/A Epoxy	0.23%	0.0006					
			0.184%	0.0005	Silver (Ag)	7440-22-4	(silver content: 70-90%; LSC uses 80% in our calculation)
			0.046%	0.0001	Esters & resins	-	Die attach epoxy Density: 4 grams/cc
Wire	0.46%	0.0013			Gold (Au)	7440-57-5	0.8 to 1.0 mil diameter; 1 wire per package lead; wire length 3 mm
Leadframe Plating	2.71%	0.008			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is 0.015mm
Leadframe	22.78%	0.064					Leadframe thickness is nominal (per Case Outline)
			21.91%	0.0614	Copper (Cu)	7440-50-8	96.2% Cu
			0.68%	0.0019	Nickel (Ni)	7440-02-0	3% Ni
			0.148%	0.00041	Silicon (Si)	7440-21-3	0.65% Si
			0.03%	0.00010	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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Rev. A