



Device Material Content

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Package: 20 PLCC with SnPb Plating
Total Device Weight 0.70 Grams

January, 2011	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	0.46%	0.003			Silicon chip	7440-21-3	Die size: 1.63 x 1.68 mm
Mold	83.47%	0.584	73.20%	0.512	Silica Fused	60676-86-0	Mold Compound Density between 1.7 and 2.1 grams/cc 75 to 95% Silica Fused (LSC uses 87.7% in our calculation) 2 to 8% Epoxy Resin (LSC uses 5% in our calculation). 3 to 8% Phenol Resin (LSC uses 5% in our calculation). 0 to 3% Epoxy Cresol Novolac (LSC uses 2% in our calculation). 0.1 to 0.5% Carbon black (LSC uses 0.3% in our calculation)
			4.17%	0.029	Epoxy Resin	-	
			4.17%	0.029	Phenol Resin	-	
			1.67%	0.012	Epoxy Cresol Novolac	9003-35-4	
			0.25%	0.002	Carbon black	1333-86-4	
D/A Epoxy	0.04%	0.0003	0.03%	0.0002	Silver (Ag)	7440-22-4	Die attach epoxy Density: 4 grams/cc Silver content: 60-100% (LSC uses 80% in our calculation).
			0.01%	0.0001	other	-	
Wire	0.08%	0.001			Gold (Au)	7440-57-5	1 wire per package lead; wire length 3 mm
Lead Plating	0.68%	0.005	0.58%	0.004	Tin (Sn)	7440-31-5	Plating is 85% Sn, 15% Pb; thickness is 0.015mm
			0.10%	0.001	Lead (Pb)	7439-92-1	
Leadframe	15.26%	0.107	15.033%	0.105	Copper (Cu)	7440-50-8	Leadframe thickness is nominal (per Case Outline) Cu (LSC uses 98.5% in our calculation) 0 to 2.35% Fe (LSC uses 1.25% in our calculation) 0 to 0.07% P (LSC uses 0.03% in our calculation) 0.12 to 0.15% Zn (LSC uses 0.14% in our calculation) 0 to 0.15% Zr (LSC uses 0.08% in our calculation)
			0.191%	0.0013	Iron (Fe)	7439-89-6	
			0.005%	0.00003	Phosphorus (P)	7723-14-0	
			0.021%	0.00015	Zinc (Zn)	7440-66-6	
			0.012%	0.00009	Zirconium (Zr)	7440-67-7	

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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