



Package Material Composition and Mass Calculation

Customer : NVL
 Package : VFQFN 32L 5x5x0.9PKG
 Device Type : nPM1300-QEAA-1#5X
 Die Size(mm) : nPM1300-QEAA#5X
 Die Size(mm) : 3.1000x2.4000
 Estimate Pkg. Wt (mg) **77.01**

Provided By : Doris Chao
 Date : 09/06/2023
 Code : 95-21-0000-0001/07/02

	name	vendor	material composition	CAS No.	%	mg.(ave)	mg.	%	PPM
Mold Compound	EME-G700LA TypeL-A	SUMITOMO	Epoxy Resin	Trade secret	5-10%	2.92500	<u>32.50</u>	<u>42.202%</u>	<u>422.016</u>
			Phenol Resin	Trade secret	1-5%	0.97500		3.798%	37.981
			Silica(Amorphous) A	60676-86-0	70-80%	25.57750		33.213%	332.127
			Silica(Amorphous) B	7631-86-9	5-10%	2.92500		3.798%	37.981
			Carbon black	1333-86-4	0.1 - 1%	0.09750		0.127%	1.266
LEADFRAME	C194_Ag	HDS	Iron(Fe)	7439-89-6	2.097-2.276%	0.81530	<u>38.82</u>	<u>50.413%</u>	<u>504.131</u>
			Phosphorus(P)	7723-14-0	0.015-0.131%	0.03882		1.059%	10.587
			Zinc(Zn)	7440-66-6	0.050-0.175%	0.03882		0.050%	504
			Copper(Cu)	7440-50-8	84.929-97.718'	37.73474		48.999%	489.990
			Silver(Ag)	7440-22-4	0.120-12.48%	0.19412		0.252%	2.521
			Lead(Pb)	7439-92-1	0.000-0.009%	0.00194		0.003%	25
Die_1	Silicon		Silicon	7440-21-3	100%		<u>3.63</u>	<u>4.711%</u>	<u>47.114</u>
Die Attach_1	EN-4900G*	Resonac	Silver(Ag)	7440-22-4	72-82%	0.47546	<u>0.64</u>	<u>0.834%</u>	<u>8.343</u>
			Cresol Novolac Epoxy Resins	Trade secret	1-4%	0.01606		0.617%	6.174
			Bisphenol A Diacrylate	Trade secret	6-11%	0.05783		0.021%	209
			Dicyclopentyl group containir	Trade secret	3-8%	0.03855		0.075%	751
			Butadiene copolymer	Trade secret	<2.0%	0.00964		0.050%	501
			Polybutadiene epoxidized deriv	Trade secret	<2.0%	0.00964		0.013%	125
			Peroxy Ketals	Trade secret	< 1.0%	0.03213		0.042%	417
			Substitutedalkoxyalkyl trimetho	Trade secret	< 1.0%	0.00321		0.004%	42
			Methacrylate multialkoxysubstit	Trade secret	< 1.0%	0.00482		0.006%	63
								0.006%	63
Wire_2	Cu wire	NIPPON	Copper(Cu)	7440-50-8	≥96.55%	0.26803	<u>0.27</u>	<u>0.350%</u>	<u>3.495</u>
			Palladium(Pd)	7440-05-3	≤3.1%	0.00032		0.3480%	3,480
			Gold(Au)	7440-57-5	≤0.35%	0.00081		0.0004%	4
								0.0010%	10
External Plating	Sn plating	SHENMAO	Tin(Sn)	7440-31-5	>99.97%	1.14747	<u>1.15</u>	<u>1.490%</u>	<u>14.900</u>
								1.490%	14,900
Total							77.01	100%	1000000

DISCLAIMER

- The above material declaration be able to use only as reference in identifying the Hazardous material content of the product and the estimated weight of IC package.
- ASECL verify the content substances based on the SDS report provided by each raw material vendor, not the material composition of the final product.
- ASECL's suppliers consider certain information proprietary, thus, CAS numbers and other limited information may not be available for release.
- Lead frame and substrate are belong to "re-make product" by other homogeneous material. As a result, the composition will be different with SDS report.