



Package Material Composition and Mass Calculation

ASECL Confidential / Security-C

Customer : NVL
 Package : WLCSP
 Device Type : nPM6000-CBAA F00, nPM6001-CAAA-R
 Die Size(mm) : 2.175x3.635
 Total Pkg. Wt (mg): 6.31

Provided By : ASECL
 Date : 20/06/2022
 Rev. :

	name	material composition	CAS No.	%	mg.(ave)	mg.	%	PPM
Silicon	Silicon	Silicon	7440-21-3	100%		4.19268	66.426%	664,255
Polymer 1/2	PBO (HD8820)					0.06819	1.080%	10,804
		γ-Butyrolactone (γ-Butyrolact	96-48-0	45-55%	0.03410		0.540%	5,402
		1-methoxy-2-propyl acetate	108-65-6	1-10%	0.00375		0.059%	594
		1-Methoxy-2-propanol						
		N-Methyl-2-pyrrolidone (N-Me	872-50-4	<1%	0.00001		0.000%	2
		Ethanol (Ethanol)	64-17-5	<1%	0.00034		0.005%	54
		Non regulated ingredients (N Trade secret		<=45%	0.02999		0.475%	4,752
UBM	UBM					0.10987	1.741%	17,406
		Titanium (Ti)	7440-32-6	100%	0.00064		0.010%	101
		Copper (Cu)	7440-50-8	100%	0.10923		1.731%	17,305
Solder Ball	SnAgCu405					1.62487	25.743%	257,431
		Tin	7440-31-5	90-100%	1.55175		24.585%	245,847
		Silver	7440-22-4	4%	0.06499		1.030%	10,297
		Copper	7440-50-8	0.1-3%	0.00812		0.129%	1,287
BSC Film	LC-2850					0.31625	5.010%	50,103
		Silica	60676-86-0	60%	0.18975		3.006%	30,062
		Epoxy Resin	Trade secret	12%	0.03795		0.601%	6,012
		Acrylic ester co-polymer	Trade secret	12%	0.03795		0.601%	6,012
		Additive	Trade secret	12%	0.03795		0.601%	6,012
		Carbon black	1333-86-4	4%	0.01265		0.200%	2,004
Total						6.31	100%	100000

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.