Package Material Composition and Mass Calculation

Customer : NVL
Package : VFaQFN 73L 7x7x0.8PKG
Device Type : nRF52833-QIAA#3X
Die Size(mm) : 3.192x3.192
Total Pkg. Wt (mg): 118.80186

Provided By : Anna Chang
Date : 8/20/2019
Rev. :

	name	vendor	material composition	CAS No.	%	mg.(ave)	mg.	%	PPM	SGS Report
Mold Compound	EME-G700LA TypeL-A	SUMITOMO					66.15	55.681%	556,809	E:\QA_IQA_GP\ Supplier's GP Data
			Epoxy Resin	Trade secret	5-10%	5.95350		5.011%	50,113	
			Phenol Resin	Trade secret	1-5%	1.98450		1.670%	16,704	
			Silica(Amorphous) A	60676-86-0	70-80%	52.06005		43.821%	438,209	
			Silica(Amorphous) B	7631-86-9	5-10%	5.95350		5.011%	50,113	
			Carbon black	1333-86-4	0.1 - 1%	0.19845		0.167%	1,670	
Leadframe	EFTEC64T_PPF	長華					46.34	39.002%	390,024	E:\QA_IQA_GP\ Supplier's GP Data (x4)
			Copper(Cu)	7440-50-8	Balance(89% M	45.52475		38.320%	383,199	
			Chromium(Cr)	7440-47-3	0.25%	0.11584		0.098%	975	
			Tin(Sn)	7440-31-5	0.25%	0.11584		0.098%	975	
			Zinc(Zn)	7440-66-6	0.20%	0.09267		0.078%	780	
			Nickel(Ni)	7440-02-0	0.3~9.0%	0.23168		0.195%	1,950	
			Palladium(Pd)	7440-05-3	0.04~0.8%	0.23168		0.195%	1,950	
			Gold(Au)	7440-57-5	0.001~0.1%	0.02317		0.020%	195	
Die_1	Silicon		Silicon	7440-21-3	100%		4.97	4.183%	41,825	N/A
Die Attach_1	EN-4900G*	HITACHI					0.88	0.741%	7,407	E:\QA_IQA_GP\ Supplier's GP Data
			Silver(Ag)	7440-22-4	72-82%	0.65113		0.548%	5,481	
			Acrylic resin	Trade secret	6-11%	0.07919		0.067%	667	
			Polybutadiene derivative	Trade secret	2-9%	0.04400		0.037%	370	
			Butadiene copolymer	Trade secret	< 2.0 %	0.01320		0.011%	111	
			Acrylate	Trade secret	3-8%	0.05279		0.044%	444	
			Epoxy resin	Trade secret	1-4%	0.02200		0.019%	185	
			Peroxide	Trade secret	< 1.0%	0.00440		0.004%	37	
			Additive	Trade secret	< 2.0%	0.01320		0.011%	111	
Wire_1	Cu wire	NIPPON					0.47	0.393%	3,934	E:\QA_IQA_GP\ Supplier's GP Data
			Copper(Cu)	7440-50-8	≥96.55%	0.46545		0.3918%	3,918	
			Palladium(Pd)	7440-05-3	≤3.1%	0.00056		0.0005%	5	
			Gold(Au)	7440-57-5	≤0.35%	0.00140		0.0012%	12	
Total							118.80	100%	1000000	

DISCLAIMER
- The above material declaration can be used only as reference in identifying the Hazardous material content of the product.
- ASE does not guarantee the Material composition accuracy as it is based on the data provided by outside sources and has not been validated.
- This material declaration does not include data from any active and passive component assembled in the package.
- Due to Leadframe and substrate is belong "re-make product" by other homogeneous material , so it's composition will be different with SDS