



## Package Material Composition and Mass Calculation

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Customer : NVL  
 Package : VFOFN 48L 6x6x0.9PKG  
 Device Type : nRF7002-QFAA-T#7X  
 Die Size(mm) : 3.7680x3.4010  
 Estimate Pkg. Wt (mg) 111.77

Provided By : Doris Chao  
 Date : 29/11/2022  
 Code : 95-21-0000-000107/02

	name	vendor	material composition	CAS No.	%	mg.(ave)	mg.	%	PPM			
Mold Compound	EME-G700LA TypeL-A	SUMITOMO	Epoxy Resin	Trade secret	5-10%	4.21200	<b>46.80</b>	<b>41.873%</b>	<b>418.734</b>			
			Phenol Resin	Trade secret	1-5%	1.40400						
			Silica(Amorphous) A	60676-86-0	70-80%	36.83160						
			Silica(Amorphous) B	7631-86-9	5-10%	4.21200						
			Carbon black	1333-86-4	0.1 - 1%	0.14040						
LEADFRAME	C194_Ag	MITSUI(MJA)	Copper(Cu)	7440-50-8	97.22%	53.74810	<b>55.29</b>	<b>49.465%</b>	<b>494.652</b>			
			Iron(Fe)	7439-89-6	2.29%	1.26603						
			Zinc(Zn)	7440-66-6	0.15%	0.08293						
			Phosphorus(P)	7723-14-0	0.03%	0.01659						
			Silver(Ag)	7440-22-4	0.31%	0.17138						
Die_1	Silicon		Silicon	7440-21-3	100%		<b>6.25</b>	<b>5.589%</b>	<b>55.887</b>			
Die Attach_1	EN-4900G*	Showa Denko	Silver(Ag)	7440-22-4	72-82%	0.81852	<b>1.11</b>	<b>0.990%</b>	<b>9.897</b>			
			Cresol Novolac Epoxy Resins	Trade secret	1-4%	0.02765						
			Bisphenol A Diacrylate	Trade secret	6-11%	0.09955						
			Dicyclopentenyl group containin	Trade secret	3-8%	0.06637						
			Butadiene copolymer	Trade secret	<2.0%	0.01659						
			Polybutadiene epoxidized deriv	Trade secret	2-9%	0.05531						
			Peroxy Ketals	Trade secret	< 1.0%	0.00553						
			Substitutedalkoxyalkyl trimetho	Trade secret	< 1.0%	0.00830						
			Methacrylate multialkoxysubstit	Trade secret	< 1.0%	0.00830						
Wire_2	Cu wire	NIPPON	Copper(Cu)	7440-50-8	≥96.55%	0.46936				<b>0.47</b>	<b>0.422%</b>	<b>4.217</b>
			Palladium(Pd)	7440-05-3	≤3.1%	0.00057						
			Gold(Au)	7440-57-5	≤0.35%	0.00141						
External Plating	Sn plating	SHENMAO	Tin(Sn)	7440-31-5	>99.97%	1.85674	<b>1.86</b>	<b>1.661%</b>	<b>16.613</b>			
<b>Total</b>							<b>111.77</b>	<b>100%</b>	<b>1000000</b>			

**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.