



Package Material Composition and Mass Calculation

Customer : NVL
 Package : VFQFN 24L 4x4x0.9PKG
 Device Type : nPM1100-QDAA#5
 Die Size(mm) : 2.1000x2.1000
 Estimate Pkg. Wt (mg) **48.72**

Provided By : Doris Chao
 Date : 03/02/2023
 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% | 1.87200 | 20.80 | 42.692% | 426.925 | | | | | | |
| | | | Phenol Resin | Trade secret | 1-5% | 0.62400 | | | | 3.842% | 38.423 | | | | |
| | | | Silica(Amorphous) A | 60676-86-0 | 70-80% | 16.36960 | | | | 33.599% | 335.990 | | | | |
| | | | Silica(Amorphous) B | 7631-86-9 | 5-10% | 1.87200 | | | | 3.842% | 38.423 | | | | |
| | | | Carbon black | 1333-86-4 | 0.1 - 1% | 0.06240 | | | | 0.128% | 1.281 | | | | |
| LEADFRAME | C194_Ag | MITSUI(MJA) | Copper(Cu) | 7440-50-8 | 97.22% | 23.88804 | 24.57 | 50.433% | 504.328 | | | | | | |
| | | | Iron(Fe) | 7439-89-6 | 2.29% | 0.56268 | | | | 1.155% | 11.549 | | | | |
| | | | Zinc(Zn) | 7440-66-6 | 0.15% | 0.03686 | | | | 0.076% | 756 | | | | |
| | | | Phosphorus(P) | 7723-14-0 | 0.03% | 0.00737 | | | | 0.015% | 151 | | | | |
| | | | Silver(Ag) | 7440-22-4 | 0.31% | 0.07617 | | | | 0.156% | 1,563 | | | | |
| Die_1 | Silicon | | Silicon | 7440-21-3 | 100% | | 2.15 | 4.414% | 44.143 | | | | | | |
| Die Attach_1 | EN-4900G* | Resonac | Silver(Ag) | 7440-22-4 | 72-82% | 0.28183 | 0.38 | 0.782% | 7.817 | | | | | | |
| | | | Cresol Novolac Epoxy Resins | Trade secret | 1-4% | 0.00952 | | | | 0.020% | 195 | | | | |
| | | | Bisphenol A Diacrylate | Trade secret | 6-11% | 0.03428 | | | | 0.070% | 704 | | | | |
| | | | Dicyclopentenyl group containir | Trade secret | 3-8% | 0.02285 | | | | 0.047% | 469 | | | | |
| | | | Butadiene copolymer | Trade secret | <2.0% | 0.00571 | | | | 0.012% | 117 | | | | |
| | | | Polybutadiene epoxidized deriv | Trade secret | 2-9% | 0.01904 | | | | 0.039% | 391 | | | | |
| | | | Peroxy Ketals | Trade secret | < 1.0% | 0.00190 | | | | 0.004% | 39 | | | | |
| | | | Substitutedalkoxyalkyl trimetho | Trade secret | < 1.0% | 0.00286 | | | | 0.006% | 59 | | | | |
| | | | Methacrylate multialkoxysubstit | Trade secret | < 1.0% | 0.00286 | | | | 0.006% | 59 | | | | |
| | | | Wire_2 | Cu wire | NIPPON | Copper(Cu) | | | | 7440-50-8 | ≥96.55% | 0.09782 | 0.10 | 0.202% | 2.016 |
| | | | | | | Palladium(Pd) | | | | 7440-05-3 | ≤3.1% | 0.00012 | | | |
| Gold(Au) | 7440-57-5 | ≤0.35% | | | | 0.00029 | 0.0006% | 6 | | | | | | | |
| External Plating | Sn plating | SHENMAO | Tin(Sn) | 7440-31-5 | >99.97% | 0.71967 | 0.72 | 1.477% | 14.771 | | | | | | |
| Total | | | | | | | 48.72 | 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.