# Material Declaration Sheet

-. Device : ASFC5G31P3-51BIN
-. Package : 11.5 x 13.0 153ball FBGA eMMC
-. Weight (mg) : 307.3219mg

| Material | Component wt (mg) | Purpose | Substances | CAS No. | Weight (mg) | wt % of Total unit wt | Element wt (%) | PPM |
|---|---|---|---|---|---|---|---|---|
| Printed Circuit Board | 89.6772 | Au | Au Plating | 7440-57-5 | 0.1806 | 0.0588% | 0.2013% | 588 |
| | | Ni | Ni Plating | 7440-02-0 | 1.4043 | 0.4569% | 1.5659% | 4569 |
| | | Cu | Cu Plating | 7440-50-8 | 60.2458 | 19.6035% | 67.1807% | 196035 |
| | | Core | Copper foil | 7440-50-8 | 9.6540 | 3.1413% | 10.7652% | 31413 |
| | | | E-Glass Fabric | 65997-17-3 | 9.6540 | 3.1413% | 10.7652% | 31413 |
| | | Solder Mask | Poly(acrylicacid) | Trade Secret | 3.4871 | 1.1347% | 3.8885% | 11347 |
| | | | Barium sulfate | 7727-43-7 | 2.0954 | 0.6818% | 2.3366% | 6818 |
| | | | 3-Methoxy-3-methylbutyl Acetate | 103429-90-9 | 1.0239 | 0.3332% | 1.1418% | 3332 |
| | | | Dipropylene Glycol Monomethyl Ether | 34590-94-8 | 0.8661 | 0.2818% | 0.9658% | 2818 |
| | | | Talc | 14807-96-6 | 0.2128 | 0.0693% | 0.2373% | 693 |
| | | | Photoplymerization | Trade Secret | 0.2128 | 0.0693% | 0.2373% | 693 |
| | | | Solvent naphtha | 64742-94-5 | 0.2128 | 0.0693% | 0.2373% | 693 |
| | | | Auxiliaries | Trade Secret | 0.2128 | 0.0693% | 0.2373% | 693 |
| | | | Silicon dioxide | Trade Secret | 0.0412 | 0.0134% | 0.0460% | 134 |
| | | | Phthalocyanine blue | Trade Secret | 0.0412 | 0.0134% | 0.0460% | 134 |
| | | | Organic pigment | Trade Secret | 0.1324 | 0.0431% | 0.1477% | 431 |
| | | | | | | | | |
| Chip Capacitor | 3.2000 | Ceramics | Barium oxide, obtained by calcining witherite | 1304-28-5 | 1.2780 | 0.4159% | 39.9375% | 4159 |
| | | | Titanium dioxide | 13463-67-7 | 0.6390 | 0.2079% | 19.9688% | 2079 |
| | | | Misc | Trade Secret | 0.2130 | 0.0693% | 6.6563% | 693 |
| | | Outer electrode | Copper | 7440-50-8 | 0.3438 | 0.1119% | 10.7438% | 1119 |
| | | | Borosilicate Glass | - | 0.0076 | 0.0025% | 0.2388% | 25 |
| | | | Silicon dioxide | 7631-86-9 | 0.0306 | 0.0099% | 0.9550% | 99 |
| | | Nickel plating | Nickel | 7440-02-0 | 0.0360 | 0.0117% | 1.1250% | 117 |
| | | Inner electrode | Nickel | 7440-02-0 | 0.5580 | 0.1816% | 17.4375% | 1816 |
| | | Tin plating | Tin | 7440-31-5 | 0.0940 | 0.0306% | 2.9375% | 306 |
| | | | | | | | | |
| FLASH Die | 11.3000 | Silicon Die | Silicon | 7440-21-3 | 11.2999887 | 3.6769% | 99.9999% | 36769 |
| | | | Misc | - | 0.0000113 | 0.0000% | 0.0001% | 0 |
| | | | | | | | | |
| FLASH Die Attach - DAF Tape | 0.1000 | Adhesive Resin | Acryl copolymer | Trade Secret | 0.0429 | 0.0139% | 42.8571% | 139 |
| | | | Epoxy | 29690-82-2 | 0.0143 | 0.0046% | 14.2857% | 46 |
| | | | Hardener | Trade Secret | 0.0143 | 0.0046% | 14.2857% | 46 |
| | | | Silica | 7631-86-9 | 0.0286 | 0.0093% | 28.5714% | 93 |
| | | | | | | | | |
| Controller Die | 2.6406 | Silicon Die | Silicon | 7440-21-3 | 2.6406 | 0.8592% | 99.9999% | 8592 |
| | | | Misc | - | 0.0000 | 0.0000% | 0.0000% | 0 |
| | | | | | | | | |
| Controller Die Attach - Adhesive | 0.1000 | Adhesive | EP | - | 0.0490 | 0.0159% | 48.9600% | 159 |
| | | | Silanamin, 1,1,1-Trimethyl-N-(trimethylsilyl)-, Hydrolyseprodukte mit Siliciumdioxid | 68909-20-6 | 0.0340 | 0.0111% | 34.0000% | 111 |
| | | | Siliziumdioxid | 7631-86-9 | 0.0170 | 0.0055% | 17.0000% | 55 |
| | | | Dieisentrioxid | 1309-37-1 | 0.0000 | 0.0000% | 0.0300% | 0 |
| | | | Calciumbis[4-[[3-[[2-hydroxy-3-[[(4-methoxyphenyl)amino]carbonyl]-1-naphthyl]azo]-4-methylbenzoyl]amino]benzolsulfonat] | 43035-18-3 | 0.0000 | 0.0000% | 0.0050% | 0 |
| | | | N-(2,3-Dihydro-2-oxo-1Hbenzimidazol-5-yl)-3-hydroxy-4-[[2-methoxy-5-methyl-4-[(methylamino)sulfonyl]phenyl]azo]na phthalin-2-carboxamid | 51920-12-8 | 0.0000 | 0.0000% | 0.0050% | 0 |
| | | | | | | | | |
| Bonding Wire | 0.7080 | Bonding wire | Gold | 7440-57-5 | 0.7079 | 0.2304% | 99.9900% | 2304 |
| | | | Misc | - | 0.0001 | 0.0000% | 0.0100% | 0 |
| | | | | | | | | |
| Molding Compound | 183.0000 | Molding Compound | Silica (Fused) | 60676-86-0<br>7631-86-9 | 158.6610 | 51.6270% | 86.7000% | 516270 |
| | | | Epoxy resin (1) | - | 9.1500 | 2.9773% | 5.0000% | 29773 |
| | | | Epoxy resin (2) | - | 4.5750 | 1.4887% | 2.5000% | 14887 |
| | | | Phenol resin (1) | - | 5.4900 | 1.7864% | 3.0000% | 17864 |
| | | | Phenol resin (2) | - | 4.5750 | 1.4887% | 2.5000% | 14887 |
| | | | Carbon black | 1333-86-4 | 0.5490 | 0.1786% | 0.3000% | 1786 |
| | | | | | | | | |
| Solderpaste | 0.5900 | Solderpaste | Tin | 7440-31-5 | 0.4720 | 0.1536% | 80.0000% | 1536 |
| | | | Silver | 7440-22-4 | 0.0236 | 0.0077% | 4.0000% | 77 |
| | | | Rosin, oligomers | 65997-05-9 | 0.0354 | 0.0115% | 6.0000% | 115 |
| | | | 2-(2-Hexyloxyethoxy)ethanol | 112-59-4 | 0.0354 | 0.0115% | 6.0000% | 115 |
| | | | Indium | 7440-74-6 | 0.0212 | 0.0069% | 3.6000% | 69 |
| | | | Bismut | 7440-69-9 | 0.0024 | 0.0008% | 0.4000% | 8 |
| | | | | | | | | |
| Solder Balls | 16.0061 | Solder Balls | Tin | 7440-31-5 | 15.4299 | 5.0208% | 96.4000% | 50208 |
| | | | Silver | 7440-22-4 | 0.4802 | 0.1562% | 3.0000% | 1562 |
| | | | Copper | 7440-50-8 | 0.0960 | 0.0312% | 0.6000% | 312 |
| | | | | | | | | |
| | | | | Total | 307.3219 | 100.0000% | | 1000000 |