



## Package Chemistry Substances Analysis Table

<b>Package Type:</b>	<b>LAA 064</b> (SnPb solder balls)
<b>Dimension:</b>	<b>13 x 11 mm</b>
<b>Weight of Unit Package:</b>	<b>268.7mg</b>
<b>Temperature rating:</b>	<b>260°C</b>
<b>MSL:</b>	<b>3</b>
<b>Assembly Location:</b>	<b>BKK</b>
	<b>Product is <u>NOT</u> RoHS Compliant</b>

Description	Chemicals Present	CAS Number	unit weight(mg)	unit weight/package (%)	Amount (ppm)
<b>Silicon Die</b>	#1 Silicon	7440-21-3	7.6527	2.8485	28,485
	<b>subtotal</b>		<b>7.6527</b>	<b>2.8485</b>	<b>28,485</b>
<b>Bond wire</b>	#1 Copper	7440-50-8	0.3121	0.1162	1,162
	#2 Palladium (Pd)	7440-05-3	0.0041	0.0015	15
	<b>subtotal</b>		<b>0.3162</b>	<b>0.1177</b>	<b>1,177</b>
<b>Die Attach</b>	#1 Epoxy resin	Trade Secret	0.1331	0.0495	495
	#2 Polytetrafluoroethylene	9002-84-0	0.1089	0.0405	405
	<b>subtotal</b>		<b>0.2419</b>	<b>0.0901</b>	<b>901</b>
<b>Substrate</b>	#1 Brominated Epoxy Resins	Trade Secret	5.5580	2.0688	20,688
	#2 Copper	7440-50-8	22.3279	8.3108	83,108
	#3 Gold	7440-57-5	0.3395	0.1264	1,264
	#4 Nickel	7440-02-0	1.5655	0.5827	5,827
	#5 Epoxy resin	Trade Secret	23.9026	8.8970	88,970
	#6 Silica	14808-60-7	4.7029	1.7505	17,505
	#7 SiO2 Glass Cloth	65997-17-3	20.5219	7.6386	76,386
	<b>subtotal</b>		<b>78.9184</b>	<b>29.3749</b>	<b>293,749</b>
<b>Mold compound</b>	#1 Silica (fused)	60676-86-0	110.0787	40.9734	409,734
	#2 Carbon Black	1333-86-4	0.3238	0.1205	1,205
	#3 Epoxy resin	Trade Secret	17.9364	6.6762	66,762
	#4 Phosphoric organic catalyst	Trade Secret	0.3885	0.1446	1,446
	#5 Metal Oxide	Trade Secret	0.7770	0.2892	2,892
	<b>subtotal</b>		<b>129.5044</b>	<b>48.2040</b>	<b>482,040</b>
<b>Solder ball</b>	#1 Tin	7440-31-5	32.7762	12.1999	121,999
	#2 Lead	7439-92-1	19.2495	7.1650	71,650
	<b>subtotal</b>		<b>52.0256</b>	<b>19.3649</b>	<b>193,649</b>
<b>TOTAL PACKAGE</b>			<b>268.6593</b>	<b>100.0000</b>	<b>1,000,000</b>

Disclaimer:

In general, four decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

**Document History Page**

Document Title: Material Declaration Datasheet (MDDS) - FBGA064 (LAA064) - BKK - CuPd Wire - Non Pb Free  
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<b>Rev.</b>	<b>ECN No.</b>	<b>Orig. of Change</b>	<b>Description of Change</b>
**	5268282	AAC	Initial Release.