



Package Chemistry Substances Analysis Table

Package Type:	VBK 048 (SnPb solder balls)
Dimension:	8.15 x 6.15 x 1 mm
Weight of Unit Package:	85mg
Temperature rating:	260°C
MSL:	3
Assembly Location:	BKK
	Product is <u>NOT</u> RoHS Compliant

Description	Chemicals Present	CAS Number	unit weight(mg)	unit weight/package (%)	Amount (ppm)
Silicon Die	#1 Silicon	7440-21-3	9.6568	11.3698	113,698
	subtotal		9.6568	11.3698	113,698
Bond wire	#1 Copper	7440-50-8	0.2521	0.2968	2,968
	#2 Palladium	7440-05-3	0.0044	0.0051	51
	subtotal		0.2565	0.3020	3,020
Die Attach	#1 Epoxy resin	Trade Secret	0.1521	0.1790	1,790
	#2 Polytetrafluoroethylene	9002-84-0	0.1244	0.1465	1,465
	subtotal		0.2765	0.3255	3,255
Substrate	#1 Brominated Epoxy Resins	Trade Secret	1.5204	1.7901	17,901
	#2 Copper	7440-50-8	10.9131	12.8489	128,489
	#3 Gold	7440-57-5	0.0522	0.0615	615
	#4 Nickel	7440-02-0	0.2409	0.2836	2,836
	#5 Epoxy resin	Trade Secret	9.0503	10.6557	106,557
	#6 Silica	14808-60-7	1.2865	1.5147	15,147
	#7 SiO2 Glass Cloth	65997-17-3	5.6137	6.6095	66,095
	subtotal		28.6771	33.7639	337,639
Mold compound	#1 Silica (fused)	60676-86-0	32.7392	38.5467	385,467
	#2 Carbon Black	1333-86-4	0.0740	0.0871	871
	#3 Epoxy resin	Trade Secret	3.9953	4.7040	47,040
	#4 Phosphoric organic catalyst	Trade Secret	0.1850	0.2178	2,178
	subtotal		36.9935	43.5556	435,556
Solder ball	#1 Tin	7440-31-5	5.7164	6.7304	67,304
	#2 Lead	7439-92-1	3.3573	3.9528	39,528
	subtotal		9.0737	10.6832	106,832
TOTAL PACKAGE			84.9340	100.0000	1,000,000

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) - FBGA048 (VBK048) - BKK - CuPd - Non Pb Free
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**	5260107	AAC	NEW RELEASE