



# 100% Material Declaration Data Sheet FF665

PK229 (v1.0) September 24, 2007

Material Declaration Data Sheet

**Average Weight: 5.6330 g**

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
<b>Silicon Die</b>					<b>0.322090</b>	<b>5.718%</b>
	Silicon	7440-21-3	100.00		0.322090	
<b>Solder Bump</b>					<b>0.018510</b>	<b>0.329%</b>
	Tin	7440-31-5	63.00		0.011661	
	Lead	7439-92-1	37.00		0.006849	
<b>Underfill</b>					<b>0.056000</b>	<b>0.994%</b>
	Silica	60676-86-0	70.00		0.039200	
	Epoxy Resin A	9003-36-5	20.00		0.011200	
	Epoxy Resin B	25068-38-6	3.00		0.001680	
	Hardener	19900-65-3	7.00		0.003920	
<b>Heat Spreader</b>					<b>2.800000</b>	<b>49.707%</b>
	Copper	7440-50-8	99.60		2.788800	
	Nickel	7440-02-0	0.40		0.011200	
<b>Heat Spreader Adhesive</b>					<b>0.062000</b>	<b>1.101%</b>
	Organopolysiloxane mixture	N/A	100.00		0.062000	
<b>Substrate</b>					<b>1.818880</b>	<b>32.290%</b>
	Cu	7440-50-8	46.91	metal layer	0.853237	
	Ni	7440-02-0	0.52	metal layer	0.009458	
	Au	7440-57-5	0.12	metal layer	0.002183	
	Glass fiber	NA	10.50		0.190982	
	Halogen fire retardant	NA	5.25		0.095491	
	BT (core)	NA	28.00		0.509286	
	Solder mask	NA	8.70		0.158243	
<b>Solder Balls</b>					<b>0.555520</b>	<b>9.862%</b>
	Tin	7440-31-5	63.00		0.3499776	
	Lead	7439-92-1	37.00		0.2055424	

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## Revision History

The following table shows the revision history for this document.

Date	Revision	Revision
09/24/07	1.0	Initial release.