

# 100% Material Declaration Data Sheet

## FFG1513

**Average Weight: 18.5g**

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
<b>Silicon Die</b>					<b>1.06135</b>	<b>5.74</b>
	Silicon	7440-21-3	100.00		1.06135	
<b>Solder Bump</b>					<b>0.05432</b>	<b>0.29</b>
	Tin	7440-31-5	63.00		0.03422034	
	Lead	7439-92-1	37.00		0.02009766	
<b>Underfill</b>					<b>0.0440</b>	<b>0.25</b>
	Epoxy Resin A	9003-36-5	20.00		0.008800	
	Epoxy Resin B	25068-38-6	3.00		0.001320	
	Silica	60676-86-0	70.00		0.030800	
	Hardener	19900-65-3	7.00		0.003080	
<b>Heat Spreader</b>					<b>3.0000</b>	<b>16.22</b>
	Copper	7440-50-8	99.90		2.99700	
	Nickel	7440-02-0	0.10		0.00300	
<b>Heat Spreader Adhesive</b>					<b>0.053</b>	<b>0.28</b>
	Organopolysiloxane mixture		100.00		0.053000	
<b>Substrate</b>					<b>13.32398</b>	<b>72.03</b>
	Copper	7440-50-8	46.91	Metal layer	6.25027996	
	Nickel	7440-02-0	0.52	Metal layer	0.06928471	
	Gold	7440-57-5	0.12	Metal layer	0.01598878	
	BT (core)	13676-54-4/ 25722-66-1	28.00		3.73071496	
	Glass fiber	65997-17-3	10.50		1.39901811	
	Halogen fire retardant	N/A	5.25		0.69950906	
	Solder mask	Trade secret	8.70		1.15918643	
<b>Solder Balls</b>					<b>0.96318</b>	<b>5.21</b>
	Tin	7440-31-5	95.50		0.91983690	
	Silver	7440-22-4	4.00		0.03852720	
	Copper	7440-50-8	0.50		0.00481590	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
3/14/06	1.0	Initial Xilinx release.
6/06/06	1.1	100% Material Declaration.
6/19/06	1.2	Updated component descriptions.
9/22/06	1.3	Updated component descriptions and weights.
7/20/10	1.4	Updated Heat Spreader substance description.

## Notice of Disclaimer

Xilinx regards this materials data to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Xilinx subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Xilinx has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Xilinx products.