100% Material Declaration Data Sheet FF1148

PK136 (v1.3) July 20, 2010

Average Weight: 10.8689g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die					**0.694500**	**6.390**
	Silicon	7440-21-3	100.00		0.694500	
Solder Bump					**0.036115**	**0.332**
	Tin	7440-31-5	63.00		0.022753	
	Lead	7439-92-1	37.00		0.013363	
Underfill					**0.074000**	**0.681**
	Silica	60676-86-0	70.00		0.051800	
	Epoxy Resin A	9003-36-5	20.00		0.014800	
	Epoxy Resin B	25068-38-6	3.00		0.002220	
	Hardener	19900-65-3	7.00		0.005180	
Heat Spreader					**6.000000**	**55.203**
	Copper	7440-50-8	99.90		5.994000	
	Nickel	7440-02-0	0.10		0.006000	
Heat Spreader Adhesive					**0.130000**	**1.196**
	Organopolysiloxane mixture	NA	100.00		0.130000	
Substrate					**2.975310**	**27.375**
	Copper	7440-50-8	47.52	Metal layer	1.390779	
	Nickel	7440-02-0	0.52	Metal layer	0.014877	
	Gold	7440-57-5	0.11	Metal layer	0.003273	
	Glass fiber	NA	10.35		0.309432	
	Halogen fire retardant	NA	5.30		0.156085	
	BT (core)	NA	27.50		0.833087	
	Solder mask	NA	8.70		0.267778	
Solder Balls					**0.959000**	**8.823**
	Tin	7440-31-5	63.00		0.60417	
	Lead	7439-92-1	37.00		0.35483	

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Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
3/23/06	1.0	Initial Xilinx release.
7/07/06	1.1	100% Material Declaration.
9/27/06	1.2	Updated component descriptions.
7/20/10	1.3	Updated Heat Spreader substance description.

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