



# 100% Material Declaration Data Sheet for FG456 Package

PK154 (v1.4) August 24, 2012

**Average Weight: 2.0021 g**

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					<b>0.043630</b>	<b>2.179</b>
	Silicon	7440-21-3	100.00		0.043630	
Die Attach Material					<b>0.007979</b>	<b>0.399</b>
	Silver	7440-22-4	77.50		0.006184	
	Bismaleimide monomer	Trade Secret	15.00		0.001197	
	Acrylate monomer	Trade Secret	7.50		0.000598	
Mold Compound					<b>0.811861</b>	<b>40.551</b>
	Epoxy Resin A	Trade Secret	3.00		0.024356	
	Epoxy Resin B	Trade Secret	3.00		0.024356	
	Phenol Resin A	Trade Secret	3.00		0.024356	
	Phenol Resin B	Trade Secret	3.00		0.024356	
	Metal Hydroxide	Trade Secret	1.50		0.012178	
	Carbon black	1333-86-4	0.30		0.002436	
	Silica fused	60676-86-0	70.90		0.575609	
	Silica fused	7631-86-9	15.00		0.121779	
	Silica, crystalline	14808-60-7	0.30		0.002436	
Gold Wire					<b>0.010202</b>	<b>0.510</b>
	Gold (Au)	7440-57-5	99.048		0.010105	
	Palladium	7440-05-3	0.950		0.000097	
	Impurities	N/A	0.002		0.000000	
Solder Balls					<b>0.434019</b>	<b>21.679</b>
	Tin (Sn)	7440-31-5	63.00		0.273432	
	Lead (Pb)	7439-92-1	37.00		0.160587	

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Substrate					<b>0.694371</b>	<b>34.683</b>
	Copper (Cu)	7440-50-8	42.51		0.295181	
	Gold (Au)	7440-57-5	0.21		0.001473	
	Nickel (Ni)	7440-02-0	1.63		0.011334	
	Copper Foil	7440-50-8	7.12		0.049463	
	Glass Fiber	65997-17-3	13.28		0.092238	
	Inorganic Filler	13776-74-4, 7631-86-9	6.06		0.042073	
	BT (core)	13676-54-5/ 25722-66-1/ 29690-82-2/ 68541-56-0/ 25068-38-6/ 7440-50-8/ 13676-54-5/ 25722-66-1/ 29690-82-2/ 26265-08-7	22.61		0.156966	
	Solder mask	64742-94-5/ 91- 20-3/ 14807-96-6/ 7727-43-7/ 7631- 86-9/ 34590-94-8/ 85954-11-6	6.57		0.045642	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
3/21/06	1.0	Initial Xilinx release.
7/05/06	1.1	100% Material Declaration
9/27/06	1.2	Updated component descriptions.
01/19/12	1.3	Updated component weights and descriptions.
08/24/12	1.4	Updated CAS # for Pb (7439-92-1) in Solder Ball.

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