



PK542 (v1.1) January 11,
2012

100% Material Declaration Data Sheet for Spartan®-3/-3E/-3A FGG456 (Cu Wire) Package

Average Weight: 2.3000 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					0.069267	3.012
	Silicon	7440-21-3	100.00		0.069267	
Die Attach Material					0.012350	0.537
	Silver	7440-22-4	77.50		0.009571	
	Bismaleimide monomer	Trade Secret	15.00		0.001853	
	Acrylate monomer	Trade Secret	7.50		0.000926	
Mold Compound					0.810917	35.257
	Epoxy Resin	Trade Secret	5.00		0.040546	
	Phenol Resin	Trade Secret	3.00		0.024328	
	Phenol Novolac	9003-35-4	3.00		0.024328	
	Metal Hydroxide	Trade Secret	3.00		0.024328	
	Carbon black	1333-86-4	0.30		0.002433	
	Silica fused	60676-86-0	70.40		0.570886	
	Silica fused	7631-86-9	15.00		0.121638	
	Silica, crystalline	14808-60-7	0.30		0.002433	
Copper Wire					0.005455	0.237
	Copper	7440-50-8	97.28		0.005307	
	Palladium	7440-05-3	2.70		0.000147	
	Impurities	NA	0.02		0.000001	
Solder Balls					0.381957	16.607
	Tin (Sn)	7440-31-5	95.50		0.364769	
	Silver (Ag)	7440-22-4	4.00		0.015278	
	Copper (Cu)	7440-50-8	0.50		0.001910	

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Substrate					1.020054	44.350
	Copper (Cu)	7440-50-8	47.61		0.485637	
	Gold (Au)	7440-57-5	0.23		0.002375	
	Nickel (Ni)	7440-02-0	1.79		0.018270	
	Copper Foil	7440-50-8	6.46		0.065859	
	BT (core)	Trade Secret 21645-51-2 65997-17-3 7440-50-8 105391-33-1 25722-66-1	38.02		0.387834	
	Solder mask	14807-96-6 7727-43-7 7631-86-9 34590-94-8 Trade Secret 85954-11-6	5.89		0.060079	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
11/17/11	1.0	Initial Xilinx release.
01/11/12	1.1	CAS# update.

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