PK528 (v1.2) August 24, 2012

100% Material Declaration Data Sheet for Spartan®-3/-3E/-3A FGG320 (Cu Wire) Package

Average Weight: 1.1844 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					**0.046403**	**3.918**
	Silicon	7440-21-3	100.00		0.046403	
Die Attach Material					**0.008456**	**0.714**
	Silver (Ag)	7440-22-4	77.50		0.006553	
	Bismaleimide monomer	Trade Secret	15.00		0.001268	
	Acrylate monomer	Trade Secret	7.50		0.000634	
Mold Compound					**0.406264**	**34.302**
	Epoxy Resin	Trade Secret	5.00		0.020313	
	Phenol Resin	Trade Secret	3.00		0.012188	
	Phenol Novolac	9003-35-4	3.00		0.012188	
	Metal Hydroxide	Trade Secret	3.00		0.012188	
	Carbon black	1333-86-4	0.30		0.001219	
	Silica fused	60676-86-0	70.40		0.286010	
	Silica fused	7631-86-9	15.00		0.060940	
	Silica, crystalline	14808-60-7	0.30		0.001219	
Copper Wire					**0.012610**	**1.065**
	Copper (Cu)	7440-50-8	97.28		0.012267	
	Palladium	7440-05-3	2.70		0.000340	
	Impurities	NA	0.02		0.000003	
Solder Balls					**0.268040**	**22.631**
	Tin (Sn)	7440-31-5	95.50		0.255978	
	Silver (Ag)	7440-22-4	4.00		0.010722	
	Copper (Cu)	7440-50-8	0.50		0.001340	

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Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Substrate					**0.442608**	**37.370**
	Copper (Cu)	7440-50-8	29.10		0.128780	
	Nickel (Ni)	7440-02-0	5.11		0.022606	
	Gold (Au)	7440-57-5	0.37		0.001622	
	Copper Foil	7440-50-8	2.80		0.012386	
	BT (core)	21645-51-2 65997-17-3 Trade Secret	53.18		0.235382	
	Solder mask	14807-96-6 7727-43-7 7631-86-9 34590-94-8 85954-11-6 Trade Secret	9.45		0.041832	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
11/15/11	1.0	Initial Xilinx release.
02/15/12	1.1	CAS# update.
08/24/12	1.2	Updated CAS # for Au (7440-57-5) in Substrate

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