



100% Material Declaration Data Sheet for EF1136 package

PK544 (v1.0) March 7, 2012

Average Weight: 14.3000g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die					0.422208	2.953
	Silicon (Si)	7440-21-3	100.00	Basis	0.422208	
Bump Die					0.015498	0.108
	Tin (Sn)	7440-31-5	63.00	Basis	0.009764	
	Lead (Pb)	7439-92-1	37.00	Basis	0.005734	
Solder Paste					0.070000	0.490
	Tin (Sn)	7440-31-5	63.00	Metal	0.044100	
	Lead (Pb)	7439-92-1	37.00	Metal	0.025900	
Capacitor 1					0.027520	0.192
	BaTiO3 type	12047-27-7	80.69	Ceramic	0.022207	
	Manganese Dioxide	1313-13-9	1.31	Ceramic	0.000360	
	Nickel (Ni)	7440-02-0	9.08	Internal Electrode	0.002498	
	Copper (Cu)	7440-50-8	0.68	Termination	0.000186	
	Boron Oxide	1303-86-2	0.02	Termination	0.000004	
	Nickel (Ni)	7440-02-0	7.52	Plating	0.002068	
	Tin (Sn)	7440-31-5	0.64	Plating	0.000177	
	Lead (Pb)	7439-92-1	0.07	Plating	0.000020	
Capacitor 2					0.072000	0.503
	BaTiO3 type	12047-27-7	88.86	Ceramic	0.063977	
	Manganese Dioxide	1313-13-9	1.43	Ceramic	0.001029	
	Nickel (Ni)	7440-02-0	4.29	Internal Electrode	0.003086	
	Copper (Cu)	7440-50-8	0.70	Termination	0.000504	
	Boron Oxide	1303-86-2	0.01	Termination	0.000010	
	Nickel (Ni)	7440-02-0	3.57	Plating	0.002571	
	Tin (Sn)	7440-31-5	0.90	Plating	0.000648	
	Lead (Pb)	7439-92-1	0.24	Plating	0.000175	
Coating 1					0.013200	0.092
	Silica	7631-86-9	64.50	Basis	0.008514	
	Epoxy Resin A	9003-36-5	22.50	Basis	0.002970	
	Epoxy Resin B	25068-38-6	3.00	Basis	0.000396	
	Hardener	19900-65-3	10.00	Basis	0.001320	

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Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Coating 2					0.040000	0.280
	Polymer Resin	Trade Secret	54.50	Basis	0.021800	
	Siloxane polymer	Trade Secret	35.00	Basis	0.014000	
	Diallyl ether	Trade Secret	5.00	Basis	0.002000	
	Silicone	Trade Secret	5.00	Basis	0.002000	
	4, 4'-Isopropylidenediphenol	80-5-7	0.50	Basis	0.000200	
Underfill					0.065000	0.455
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	Basis	0.013000	
	Phenolic resin	Trade Secret	15.00	Basis	0.009750	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	Basis	0.003250	
	Amine type accelerator	Trade Secret	5.00	Basis	0.003250	
	Silicon dioxide	60676-86-0	51.50	Basis	0.033475	
	Carbon black	1333-86-4	1.00	Basis	0.000650	
Additives	Trade Secret	2.50	Additive	0.001625		
Lid Attach Adhesive					0.224400	1.569
	Aluminium Oxide Al ₂ O ₃	1344-28-1	80.00	basis	0.179520	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	basis	0.044880	
Lid					8.636600	60.396
	Copper (Cu)	7440-50-8	99.56	Main Material	8.598599	
	Nickel (Ni)	8049-31-8	0.44	Main Material	0.038001	
Solder Ball					1.081241	7.561
	Tin (Sn)	7440-31-5	63.00	Main Material	0.681182	
	Lead (Pb)	7439-92-1	37.00	Main Material	0.400059	

Substrate					3.632323	25.401
Plating	Copper (Cu)	7440-50-8	33.340		1.211016	
	Nickel (Ni)	7786-81-4	0.460		0.016709	
	Gold (Au)	7440-57-5	0.100		0.003632	
Copper Foil	Copper (Cu)	7440-50-8	6.770		0.245908	
Bump	Tin (Sn)	7440-31-5	0.630		0.022884	
	Lead (Pb)	7439-92-1	0.440		0.015982	
	Resin	65997-05-9	0.080		0.002906	
Core	Bismaleimide Triazine resin, Epoxy resin	13676-54-5, 25722-66-1, 29690-82-2, 68541-56-0, 25068-38-6, NA	9.300		0.337806	
	Inorganic Filler	13776-74-4, 7631-86-9	5.580		0.202684	
	Fiber Glass	65997-17-3	9.300		0.337806	
	Copper (Cu)	7440-50-8	13.020		0.472928	
PP	Bismaleimide Triazine resin, Epoxy resin, other resin	13676-54-5, 25722-66-1, 29690-82-2, 68541-56-0, 26265-08-7, NA	1.740		0.063202	
	Inorganic Filler	Trade Secret	1.240		0.045041	
	Fiber Glass	65997-17-3	1.980		0.071920	
ABF	N, N-Dimethylformamide	68-12-2	0.150		0.005448	
	Cyclohexanone	108-94-1	0.740		0.026879	
	Bisphenol A epoxy resin	25068-38-6	1.29		0.046857	
	Silica	7631-86-9	4.460		0.162002	
	Coal tar naphtha	64742-94-5	0.740		0.026879	
	Toluene	108-88-3	0.040		0.001453	
	Others	N/A	7.440		0.270245	
Soldermask	Solvent naphtha	64742-94-5	0.130		0.004722	
	Naphthalene	91-20-3	0.020		0.000726	
	Talc	14807-96-6	0.050		0.001816	
	Morpholine derivative	Trade secret	0.050		0.001816	
	Silica, amorphous	7631-86-9	0.010		0.000363	
	Barium Sulfate	7727-43-7	0.400		0.014529	
	Dipropylene glycol monomethyl ether	34590-94-8	0.220		0.007991	
	Epoxy resin	Trade secret	0.170		0.006175	
	Epoxy resin	85954-11-6	0.100		0.003632	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
03/07/2012	1.0	Initial Xilinx release.

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