



PK461 (v1.0) March 4, 2011

100% Material Declaration Data Sheet TQG144 Spartan-3AN

Average Weight: 1.2956 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die (FPGA)					0.007150	0.552
	Silicon	7440-21-3	100.00	Silicon IC	0.007150	
Silicon Die (PROM)					0.002283	0.176
	Silicon	7440-21-3	100.00	Silicon IC	0.002283	
Mold Compound					1.006400	77.676
	Silica Fused	60676-86-0	87.70	Filler	0.882613	
	Epoxy Resin	Trade Secret	7.00	Polymer	0.070448	
	Phenol Resin	Trade Secret	5.00	Hardener	0.050320	
	Carbon Black	1333-86-4	0.30	Colouring	0.003019	
Die Attach Adhesive				Die to package adhesive	0.002234	0.172
	Silver	7440-22-4	69.50	Conductive material	0.001553	
	Epoxy Resin	9003-36-5	20.00	Polymer	0.000447	
	t-Butyl phenyl glycidyl ether	3101-60-8	7.50	Diluent	0.000168	
	Phenolic resin	92-88-6	1.00	Hardener	0.000022	
	Butyl cellosolve acetate	112-07-2	1.00	Solvent	0.000022	
	Dicyandiamide	461-58-5	1.00	Polymer	0.000022	
Die Attach Film				Die to die adhesive	0.000713	0.055
	Solid Epoxy Resin	Trade Secret	12.50	Polymer	0.000089	
	Phenol Resin	Trade Secret	12.50	Hardener	0.000089	
	Fused Silica	60676-86-0	35.00	Filler	0.000250	
	Synthetic Rubber	Trade Secret	40.00	Filler	0.000285	
Solder Plating					0.013400	1.034
	Tin (Sn)	7440-31-5	100.00	Base metal	0.013400	
Gold Wire					0.003362	0.259
	Gold	7440-57-5	100.00	Metallurgy	0.003362	

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100% Material Declaration Data Sheet – TQG1444 Spartan-3AN

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Lead Frame					0.260100	20.075
	Copper (Cu)	7440-50-8	94.30	Base metal	0.245274	
	Magnesium (Mg)	7439-95-4	0.30	Base metal	0.000780	
	Nickel (Ni)	7440-02-0	4.20	Base metal	0.010924	
	Silicon (Si)	7440-21-3	1.20		0.003121	
Ink					Trace	Trace
	Solvent naphtha (petroleum)	64742-94-5	Trace		Trace	
	2-butoxyethanol	111-76-2	Trace		Trace	
	Benzyl alcohol	100-51-6	Trace		Trace	
	Bisphenol a-epichlorhydrin (reaction product)	25068-38-6	Trace		Trace	
	Iso-butanol	78-83-1	Trace		Trace	
	1,2,4-trimethylbenzene	95-63-6	Trace		Trace	
	Solvent	NA	Trace		Trace	
	Formaldehyde	50-00-0	Trace		Trace	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
3/4/11	1.0	Initial Xilinx release.

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