Material Composition Declaration

This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

Adobe Reader version 7.0.5 is required to complete this declaration.

1752-2 1.1	IPC Web Site for Information on IPC-1752 Standard http://www.ipc.org/IPC-175x	**Form Type *** Distribute	**Declaration Class *** Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat

Supplier Information

Company Name *	Company Unique ID	Unique ID Authority	**Response Date ***	Response Document ID	
Ecliptek Corporation			**2012-01-31**		
Contact Name *	Title - Contact	**Phone - Contact ***	**Email - Contact ***		
Tom Culhane	V.P. of Engineering	**(714) 433-1200**	**quality@ecliptek.com**		
Authorized Representative *	Title - Representative	**Phone - Representative ***	**Email - Representative ***	Supplier Comments or URL for Additional Information	
Tom Culhane	V.P. of Engineering	**(714) 433-1200**	**quality@ecliptek.com**	http://www.ecliptek.com/	

Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	**Weight ***	UOM	Unit Type
	EB52F3 Series		2012-01-31		China	2,017.163	mg	Each

Alternate Recommendation				Alternate Item Comments	

Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
Matte Tin (Sn) - with Nickel (Ni) barrier	**Kovar**	**1**	**240** C	**10** seconds	**2**

Comments

Terminal Plating Thickness: Tin (3.0 to 6.0µm), Nickel (2.0 to 4.0µm).

*** Required Field**

Form enabled by Adobe

Save the fields in this form to a file | Export Data | Import fields from a file into this form | Import Data | Locked

RoHS Material Composition Declaration

Declaration Type * **Detailed**

RoHS Directive 2002/95/EC	**RoHS Definition:** Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium

Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2002/95/EC and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a "RoHS restricted substance") in excess of the applicable quantity limit identified above. If a homogeneous material within the part contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part,the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Supplier's Standard Terms and Conditions of Sale applicable to such part shall apply.

RoHS Declaration *	3 - Item(s) does not contain RoHS restricted substances per the definition above except for lead in solders and selected exemptions, if any	**Supplier Acceptance ***	**Accepted**

Exemptions: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.

Exemption List Version	EL-2006/690/EC
	5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

Declaration Signature

Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.

Supplier Digital Signature	Tom Culhane	Digitally signed by Tom Culhane DN: cn=Tom Culhane, o=Ecliptek Corporation, ou=Ecliptek Corporation, email=tculhane@ecliptek.com, c=US Date: 2012.01.26 08:48:56 -08'00'	

*** Required Field**

Form enabled by Adobe

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Line Functions: +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

	Item/SubItem Name		Homogeneous Material	Weight	Unit of Measure		Level	Substance Category		Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
															-	+	
	Resistor		Substrate	18.744	mg		Supplier	Aluminum Oxide		Aluminum Oxide	1344-28-1		18.744	mg	20	20	
			Element	1.177	mg		Supplier	Ruthenium Dioxide		Ruthenium Dioxide	12036-10-1		0.418	mg	20	20	
							A	Lead/Lead Compound		Lead (II) oxide	1317-36-8	5. Lead i	0.319	mg	20	20	
							Supplier	Silicon Oxide Glass		Silicon Oxide Glass	60676-86-0		0.055	mg	20	20	
							Supplier	Boron Oxide		Boron Oxide	1303-86-2		0.055	mg	20	20	
							Supplier	Epoxy Resin		Epoxy Resin	129915-35-'		0.33	mg	20	20	
			Ceramic	1.199	mg		Supplier	Silver		Silver	7440-22-4		0.286	mg	20	20	
							Supplier	Palladium		Palladium	7440-05-3		0.011	mg	20	20	
							B	Nickel (external applic		Nickel	7440-02-0		0.484	mg	20	20	
							Supplier	Tin		Tin	7440-31-5		0.418	mg	20	20	
	Capacitor		Ceramic	58.192	mg		Supplier	Aluminum Oxide		Aluminum Oxide	1344-28-1		58.192	mg	20	20	
			Electrode	25.168	mg		Supplier	Copper		Copper	7440-50-8		6.288	mg	20	20	
							B	Nickel (external applic		Nickel	7440-02-0		18.128	mg	20	20	
							Supplier	Tin		Tin	7440-31-5		0.752	mg	20	20	
	Inductor		Terminal Paste	1.112	mg		Supplier	Silver		Silver	7440-22-4		1.102	mg	20	20	
							Supplier	Copper		Coppper	7440-50-8		0.002	mg	20	20	
							B	Nickel (external applic		Nickel	7440-02-0		0.004	mg	20	20	
							Supplier	Tin		Tin	7440-31-5		0.004	mg	20	20	
			Enameled Wire	0.72	mg		Supplier	Silver		Silver	7440-22-4		0.72	mg	20	20	
			Adhesive	0.304	mg		Supplier	Epoxy Resin		Epoxy Resin	129915-35-'		0.304	mg	20	20	
			Ceramic	2.582	mg		Supplier	Iron Oxide		Iron Oxide	1332-37-2		1.29	mg	20	20	
							Supplier	Nickel Oxide		Nickel Oxide	1314-06-3		0.516	mg	20	20	
							Supplier	Copper Oxide		Copper Oxide	1317-38-0		0.388	mg	20	20	

*** Required Field**

						Supplier	Zinc Oxide		Zinc Oxide	1314-13-2		0.388	mg	20	20	
		Molding Compou	4.862	mg		Supplier	Epoxy Resin		Epoxy Resin	129915-35-'		4.862	mg	20	20	
	Dynatron SOT-23	Active Device	0.04	mg		Supplier	Silicon		Silicon	7440-21-3		0.04	mg	20	20	
		Wire Bond	0.04	mg		Supplier	Gold		Gold	7440-57-5		0.04	mg	20	20	
		Lead Frame	0.88	mg		Supplier	Cobalt		Cobalt	7440-48-4		0.004	mg	20	20	
						Supplier	Iron		Iron	7439-89-6		0.496	mg	20	20	
						Supplier	Manganese		Manganese	7439-96-5		0.01	mg	20	20	
						B	Nickel (external applic		Nickel	7440-02-0		0.37	mg	20	20	
		Encapsulation	1.72	mg		Supplier	Epoxy		Epoxy	25928-94-3		0.31	mg	20	20	
						Supplier	Silica		Silica	14808-60-7		1.41	mg	20	20	
		Plating	0.102	mg		Supplier	Tin		Tin	7440-31-5		0.102	mg	20	20	
	IC	Lead Frame	6.381	mg		Supplier	Copper		Copper	7440-50-8		6.218	mg	20	20	
						Supplier	Iron		Iron	7439-89-6		0.153	mg	20	20	
						Supplier	Zinc		Zinc	7440-66-6		0.008	mg	20	20	
						Supplier	Phosphorus		Phosphorus	7723-14-0		0.002	mg	20	20	
		Plastic	8.548	mg		Supplier	Silica		Silica	60676-86-0		6.161	mg	20	20	
						Supplier	Epoxy Resin		Epoxy Resin	25928-94-3		2.052	mg	20	20	
						B	Antimony/Antimony C		Antimony trioxide	1309-64-4		0.222	mg	20	20	
						B	Brominated Flame Rel		TBBA-epichlorhydrin oli	40039-93-8		0.113	mg	20	20	
		Chip	0.741	mg		Supplier	Silicon		Silicon	7440-21-3		0.736	mg	20	20	
						Supplier	Aluminum		Aluminum	7429-90-5		0.005	mg	20	20	
		Die Attach	0.246	mg		Supplier	Silver		Silver	7440-22-4		0.184	mg	20	20	
						Supplier	Epoxy Resin		Epoxy Resin	25928-94-3		0.062	mg	20	20	
		Wires	0.031	mg		Supplier	Gold		Gold	7440-57-5		0.031	mg	20	20	
		Ext. Lead Finish	0.801	mg		Supplier	Tin		Tin	7440-31-5		0.801	mg	20	20	
		Int. Lead Finish	0.062	mg		Supplier	Silver		Silver	7440-22-4		0.062	mg	20	20	
	Crystal (UM-1)	Cover	52.89	mg		B	Nickel (external applic		Nickel	7440-02-0		52.89	mg	20	20	
		Base	157.73	mg		Supplier	Glass		Glass	65997-18-4		45.624	mg	20	20	
						Supplier	Iron		Iron	7439-89-6		60.942	mg	20	20	
						B	Nickel (external applic		Nickel	7440-02-0		32.276	mg	20	20	
						Supplier	Cobalt		Cobalt	7440-48-4		18.888	mg	20	20	
		Quartz	21.79	mg		Supplier	Silicon Dioxide		Silicon Dioxide	7631-86-9		21.79	mg	20	20	

			Plating	0.001	mg		Supplier	Gold		Gold	7440-57-5		0.001	mg	20	20	
	Crystal (Clip)		Retaining Clip	170	mg		Supplier	Iron		Iron	7439-89-6		170	mg	20	20	
	Package Cover		Base Metal	856.832	mg		Supplier	Carbon		Carbon	7440-44-0		1.114	mg	20	20	
							Supplier	Manganese		Manganese	7439-96-5		2.57	mg	20	20	
							Supplier	Phosphorous		Phosphorous	7723-14-0		0.344	mg	20	20	
							Supplier	Sulfur		Sulfur	7704-34-9		0.428	mg	20	20	
							Supplier	Iron		Iron	7439-89-6		852.376	mg	20	20	
			Plating	47.168	mg		B	Nickel (external applic		Nickel	7440-02-0		47.168	mg	20	20	
	Lead (PIN)		Lead	84.276	mg		Supplier	Copper		Copper	7440-50-8		79.892	mg	20	20	
							Supplier	Tin		Tin	7440-31-5		4.212	mg	20	20	
							Supplier	Phosphane		Phosphane	7723-14-0		0.172	mg	20	20	
			Plating	2.824	mg		B	Nickel (external applic		Nickel	7440-02-0		1.412	mg	20	20	
							Supplier	Tin		Tin	7440-31-5		1.412	mg	20	20	
	PCB		Lamination	304.159	mg		Supplier	Epoxy Resin, fibergla		Epoxy Resin, fiberglass	Proprietary		304.159	mg	20	20	
			Solder Mask	23.916	mg		Supplier	Epoxy Resin		Epoxy Resin	129915-35-'		8.753	mg	20	20	
							Supplier	Barium sulfide		Barium sulfide	21109-95-5		7.653	mg	20	20	
							Supplier	Phthalocyanine Gree		Phthalocyanine Green	14302-13-7		0.073	mg	20	20	
							Supplier	Aromatic Carbonyl C		Aromatic Carbonyl Con	70955-17-8		1.028	mg	20	20	
							Supplier	Amine Compound		Amine Compound	68038-01-7		0.191	mg	20	20	
							Supplier	Aromatic Hydrocarbc		Aromatic Hydrocarbon	63231-51-6		2.176	mg	20	20	
							Supplier	Diethylene Glycol Mc		Diethylene Glycol Monc	629-38-9		3.085	mg	20	20	
							Supplier	Dipropylene Glycol M		Dipropylene Glycol Mor	34590-94-8		0.55	mg	20	20	
							Supplier	Leveling agents and		Leveling agents and otl	System		0.407	mg	20	20	
			Metallization	161.925	mg		Supplier	Gold		Gold	7440-57-5		0.098	mg	20	20	
							B	Nickel (external applic		Nickel	7440-02-0		1.764	mg	20	20	
							Supplier	Copper		Copper	7440-50-8		160.063	mg	20	20	