



Material Composition Declaration

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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
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Supplier Information

Company Name * STMicroelectronics	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * Emilio Castelli	Title - Representative APG Material Declaration Cham	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information				
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
	L9942XP1	GRV5*UH42CC1	2010-07-06	A	MU1A	473.199	mg	Each
Alternate Recommendation	PowerSSO 24			Alternate Item Comments	Internal ST reference: BSA: CD00273124 EcoPack2			

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
Tin (Sn)	CU Alloy	3	260 C	30 seconds	3

Comments

Disclaimer: While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and

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RoHS Material Composition Declaration

Declaration Type *

Simplified

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

Supplier certifies that it gathered the information it provides in this form concerning RoHS restrictive substances 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.

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

+ - 7a. Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

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

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			
															-	+				
+I	-I	PowerSSO 24	+M -M	Integrated circuit	12.215	mg	+C -C	Supplier	Silicon die	+S -S	Silicon (Si)	7440-21-3		12.044	mg			986,00		
									+C -C		die metallization	+S -S	Aluminium (Al)	7429-90-5		0.002	mg			164
									+C -C		die metallization	+S -S	Copper (Cu)	7440-50-8		0.006	mg			491
									+C -C		die metallization	+S -S	Titanium (Ti)	7440-32-6		0.003	mg			246
									+C -C		die metallization	+S -S	Chromium (Cr)	7440-47-3		0.007	mg			573
									+C -C		die metallization	+S -S	Gold (Au)	7440-57-5		0.018	mg			1,474
									+C -C		die metallization	+S -S	Nickel (Ni)	7440-02-0		0.053	mg			4,339
									+C -C		die metallization	+S -S	Vanadium (V)	7440-62-2		0.004	mg			327
									+C -C		Die coating	+S -S	Gamma-butyrolactone	96-48-0		0.052	mg			4,257
									+C -C		Die coating	+S -S	Polyhydroxyamide	55295-98-2		0.023	mg			1,883
									+C -C		Die coating	+S -S	Alcoxysilane	na		0.002	mg			164
									+C -C		Die coating	+S -S	Aryl Silicic Acid	na		0.001	mg			82
			+M -M	Leadframe	171.026	mg	+C -C	supplier	frame alloy	+S -S	Copper (Cu)	7440-50-8		158.33	mg				925,76	
									+C -C		frame alloy	+S -S	Iron (Fe)	7439-89-6		3.812	mg			22,289
									+C -C		frame alloy	+S -S	Zinc (Zn)	7440-66-6		0.195	mg			1,140
									+C -C		frame alloy	+S -S	Iron Phosphide (FeP)	26508-33-8		0.136	mg			795
									+C -C		frame coating	+S -S	Silver (Ag)	7440-22-4		8.553	mg			50,010
			+M -M	Die Attach	4.898	mg	+C -C	A	soft solder	+S -S	Lead (Pb)	7439-92-1	7a. Lead	4.776	mg				975,09	
									+C -C	supplier	soft solder	+S -S	Silver (Ag)	7440-22-4		0.073	mg			14,904
									+C -C		soft solder	+S -S	Tin (Sn)	7440-31-5		0.049	mg			10,004
			+M -M	Bonding wire	1.12	mg	+C -C	Supplier	Bonding wire	+S -S	Copper (Cu)	7440-50-8		1.12	mg				1,000,0	
			+M -M	Encapsulation	276.17	mg	+C -C	supplier	Moulding Compound	+S -S	Phenol Resin	205830-20-2		11.047	mg				40,001	
									+C -C		Moulding Compound	+S -S	Biphenyl epoxy resin	85954-11-6		8.285	mg			30,000

					+C	-C		Moulding Compound	+S	-S	epoxy resin	na		8.285	mg			30,000
					+C	-C		Moulding Compound	+S	-S	carbon black	1333-86-4		0.552	mg			1,999
					+C	-C		Moulding Compound	+S	-S	Silica, vitreous	60676-86-0		248.001	mg			898,00
+M	-M	Finishing	7.769	mg	+C	-C	supplier	connection coating	+S	-S	Tin (Sn)	7440-31-5		7.769	mg			1,000,0