



# 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 <a href="http://www.ipc.org/IPC-175x">http://www.ipc.org/IPC-175x</a>	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 * NA	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * GIOVANNI GIACOPELLO	Title - Representative AMS & IPD MD CHAMPION	Phone - Representative * NA	Email - Representative * NA	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
	M41T11MH6F	A9AB*G6AAT1F	2012-04-19	A	MU1A	858.4	mg	Each
Alternate Recommendation	Package: SO 28 BATTERY			Alternate Item Comments	ECOPACK1/ROHS BSA REF: CD00327866			

## 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)	CU Alloy	3	225 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 \*** 4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions

**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

+ - 6c. Lead as an alloying element in copper containing up to 4% lead by weight.

## 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

+I	-I	Item/SubItem Name	+M	-M	Homogeneous Material	Weight	Unit of Measure	+C	-C	Level	Substance Category	+S	-S	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
																			-	+	
		A9AB*G6AAT1F			Integrated circuit	3.571	mg			Supplier	Silicon die			Silicon (Si)	7440-21-3		3.547	mg			993,27
										Supplier	Die metallization			Aluminium (Al)	7429-90-5		0.001	mg			280
										Supplier	Die coating			Gamma-butyrolactone	96-48-0		0.016	mg			4,481
														Polyhydroxyamide	55295-98-2		0.007	mg			1,960
					Leadframe	279.366	mg			Supplier	Frame alloy			Copper (Cu)	7440-50-8		269.973	mg			966,37
														Iron (Fe)	7439-89-6		6.499	mg			23,263
														Zinc (Zn)	7440-66-6		0.332	mg			1,188
														Iron Phosphide (FeP)	26508-33-8		0.233	mg			834
										Supplier	Frame coating			Silver (Ag)	7440-22-4		2.329	mg			8,337
					Die Attach	0.691	mg			Supplier	Glue			Silver (Ag)	7440-22-4		0.532	mg			769,89
														Epoxy Cresol Novolak	29690-82-2		0.156	mg			225,76
														1-isopropyl-2,2-dimethy	6846-50-0		0.003	mg			4,342
					Bonding wire	0.776	mg			Supplier	Bonding wire			Gold (Au)	7440-57-5		0.776	mg			1,000,0
					Encapsulation	557.901	mg			Supplier	Moulding Compound			Silica, vitreous	60676-86-0		446.32	mg			799,99
														Epoxy Cresol Novolak	29690-82-2		39.053	mg			70,000
														Phenol resin	9003-35-4		22.316	mg			40,000
														Biphenyl epoxy resin	85954-11-6		33.474	mg			60,000
														Antimony Trioxide	1309-64-4		6.695	mg			12,000
										JIG I	Brominated Flame Ret			Brominated Epoxy Resin	40039-93-8		8.369	mg			15,001
														Carbon black	1333-86-4		1.674	mg			3,001
					Finishing	7.695	mg			Supplier	Connection coating			Tin (Sn)	7440-31-5		7.695	mg			1,000,0
					Sockets	8.4	mg			Supplier	Sockets			Beryllium Copper (BeC	11133-98-5		5.636	mg			670,97
										JIG R	Lead/Lead Compound			Lead (Pb)	7439-92-1	6c. Lead	0.213	mg			25,326

+S	-S	Gold (Au)	7440-57-5	0.057	mg		6,732
+S	-S	Zinc (Zn)	7440-66-6	2.429	mg		289,20
+S	-S	Nickel (Ni)	7440-02-0	0.065	mg		7,758