



# 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 * 2012-05-25	Response Document ID U01L*418XXXZ				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	<input type="button" value="Duplicate Contact -&gt; Authorized Representative"/>				
Authorized Representative * Laurent Tosi	Title - Representative MMS Central Packaging	Phone - Representative * +33 442 685 795	Email - Representative * laurent.tosi@st.com	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
		LQFP 100L BODY 14x14x1.4 F	2012-05-25	A	Muar	650	mg	Each
Alternate Recommendation				Alternate Item Comments				

## Manufacturing Process Information

Terminal Plating / Grid Array Material <b>Nickel/Palladium/Gold (Ni/Pd/Au)</b>	Terminal Base Alloy <b>CU Alloy</b>	J-STD-020 MSL Rating <b>3</b>	Peak Process Body Temperature <b>260 C</b>	Max Time at Peak Temperature <b>30 seconds</b>	Number of Reflow Cycles <b>3</b>
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Comments  
**Ecopack 2 compliant: means Br-Cl & Sb oxide free. DISCLAIMER: While STMicroelectronics has endeavored to provide information which is accurate and up to date, this docum**

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Lock Supplier Fields

## 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 \*** 1 - Item(s) does not contain RoHS restricted substances per the definition above

**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.

## 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	LQFP 100L BODY 1	+M	-M	Chip	16.5783	mg	+C	-C	Supplier	silicon die	+S	-S	Silicium (Si)	7440-21-3		16.56647	mg			25,486
								+C	-C	Supplier	die metallization	+S	-S	Aluminium(Al)	7429-90-5		0.004459	mg			6.8606
												+S	-S	Copper (Cu)	7440-50-8		0.004899	mg			7.5382
												+S	-S	Titanium (Ti)	7440-32-6		0.002477	mg			3.8114
			+M	-M	Lead-frame	135.0518	mg	+C	-C	Supplier	alloy	+S	-S	Copper (Cu)	7440-50-8		129.9198	mg			199,87
												+S	-S	Nickel (Ni)	7440-02-0		4.051555	mg			6,233.1
												+S	-S	Silicium (Si)	7440-21-3		0.877836	mg			1,350.5
												+S	-S	Magnesium (Mg)	7439-95-4		0.202577	mg			311.65
			+M	-M	Lead-frame Coat	0.558537	mg	+C	-C	Supplier	coating	+S	-S	Nickel (Ni)	7440-02-0		0.519724	mg			799.57
												+S	-S	Palladium (Pd)	7440-05-3		0.021062	mg			32.403
												+S	-S	Gold (Au)	7440-57-5		0.017750	mg			27.308
			+M	-M	Die Attach	3.493584	mg	+C	-C	Supplier	glue or soft solder	+S	-S	Silver (Ag)	7440-22-4		2.751198	mg			4,232.6
												+S	-S	Urethane acrylate oligo	na		0.244550	mg			376.23
												+S	-S	Méthacrylate	na		0.244550	mg			376.23
												+S	-S	Acrylate	na		0.244550	mg			376.23
												+S	-S	NMP	872-50-4		0.008733	mg			13.436
			+M	-M	Wires	1.836604	mg	+C	-C	Supplier	Bonding wire	+S	-S	Gold (Au)	7440-57-5		1.818238	mg			2,797.2
												+S	-S	Palladium (Pd)	7440-05-3		0.018366	mg			28.255
			+M	-M	Encapsulation	492.476	mg	+C	-C	Supplier	Moulding Compound	+S	-S	Solid Epoxy Resin	na		34.47332	mg			53,035
												+S	-S	Phenol Resin	na		24.6238	mg			37,882
												+S	-S	Silica, vitreous	60676-86-0		425.9917	mg			655,37
												+S	-S	Carbon-black	1333-86-4		2.46238	mg			3,788.2
								+C	-C	B	Bismuth/Bismuth Com	+S	-S	Bismuth	7440-69-9		4.92476	mg			7,576.5

+M	-M	Finishing	0.00558	mg	+C	-C	Supplier	connections coating	+S	-S	Nickel (Ni)	7440-02-0		0.005197	mg			7.9957
									+S	-S	Palladium (Pd)	7440-05-3		0.000210	mg			0.3240
									+S	-S	Gold (Au)	7440-57-5		0.000177	mg			0.2730