



# 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 * 2012-02-17	Response Document ID PT6P*24121KB				
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
		TSSOP 8 BODY 4.4 PITCH 0.65	2012-02-17	A	Shenzhen	34	mg	Each
Alternate Recommendation				Alternate Item Comments				

## Manufacturing Process Information

Terminal Plating / Grid Array Material Nickel/Palladium/Gold (Ni/Pd/Au)	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 3
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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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## 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		+M	-M				+C	-C			+S	-S						-	+	
+I	-I	TSSOP 8 BODY 4.4	+M	-M	Chip	1.681312	mg	+C	-C	Supplier	silicon die	+S	-S	Silicium (Si)	7440-21-3		1.680211	mg			49,417
								+C	-C	Supplier	die metallization	+S	-S	Aluminium(Al)	7429-90-5		0.000414	mg			12.197
												+S	-S	Copper (Cu)	7440-50-8		0.000455	mg			13.402
												+S	-S	Titanium (Ti)	7440-32-6		0.000230	mg			6.7763
			+M	-M	Lead-frame	14.51685	mg	+C	-C	Supplier	alloy	+S	-S	Copper (Cu)	7440-50-8		14.14667	mg			416,07
												+S	-S	Iron (Fe)	7439-89-6		0.340565	mg			10,016
												+S	-S	Zinc (Zn)	7440-66-6		0.017420	mg			512.35
												+S	-S	Iron Phosphide (FeP)	26508-33-8		0.012194	mg			358.64
			+M	-M	Lead-frame Coat	0.09846	mg	+C	-C	Supplier	coating	+S	-S	Nickel (Ni)	7440-02-0		0.090269	mg			2,654.9
												+S	-S	Palladium (Pd)	7440-05-3		0.005779	mg			169.98
												+S	-S	Gold (Au)	7440-57-5		0.002412	mg			70.949
			+M	-M	Die Attach	0.485385	mg	+C	-C	Supplier	glue or soft solder	+S	-S	Silver (Ag)	7440-22-4		0.388308	mg			11,420
												+S	-S	2,6-Diglycidylphenyl all	13561-08-5		0.072807	mg			2,141.3
												+S	-S	1,4-bis (2,3-epoxyprop	2425-79-8		0.009707	mg			285.51
												+S	-S	Polyoxypropylenediam	9046-10-0		0.014561	mg			428.27
			+M	-M	Wires	0.039433	mg	+C	-C	Supplier	Bonding wire	+S	-S	Gold (Au)	7440-57-5		0.039433	mg			1,159.8
			+M	-M	Encapsulation	17.178	mg	+C	-C	Supplier	Moulding Compound	+S	-S	Epoxy Resin	na		1.28835	mg			37,892
												+S	-S	Phenol Resin	na		0.8589	mg			25,261
												+S	-S	Silicon Dioxide	60676-86-0		14.87614	mg			437,52
												+S	-S	Carbon-black	1333-86-4		0.08589	mg			2,526.1
								+C	-C	B	Bismuth/Bismuth Com	+S	-S	Bismuth	7440-69-9		0.068712	mg			2,020.9
			+M	-M	Finishing	0.000984	mg	+C	-C	Supplier	connections coating	+S	-S	Nickel (Ni)	7440-02-0		0.000902	mg			26.549
												+S	-S	Palladium (Pd)	7440-05-3		0.000057	mg			1.6998

+S	-S	Gold (Au)	7440-57-5		0.00024mg			0.7094
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