



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 * STMicroelectornic	Company Unique ID	Unique ID Authority	Response Date * 2012-06-11	Response Document ID PT6P*95281KL
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	<input type="button" value="Duplicate Contact -> 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	2012-06-11	A	Shenzhen	16	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 *

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 *

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						-	+	
		TSSOP 8 BODY 4.4			Chip	0.95197	mg	+C	-C	Supplier	silicon die	+S	-S	Silicium (Si)	7440-21-3		0.950870	mg			27,967
								+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			6.7765
			+M	-M	Lead-frame	14.51685	mg	+C	-C	Supplier	alloy	+S	-S	Copper (Cu)	7440-50-8		14.14667	mg			416,08
												+S	-S	Iron (Fe)	7439-89-6		0.340565	mg			10,016
												+S	-S	Zinc (Zn)	7440-66-6		0.017420	mg			512.36
												+S	-S	Iron Phosphide (FeP)	26508-33-8		0.012194	mg			358.65
			+M	-M	Lead-frame Coat	0.09846	mg	+C	-C	Supplier	coating	+S	-S	Nickel (Ni)	7440-02-0		0.090269	mg			2,655.0
												+S	-S	Palladium (Pd)	7440-05-3		0.005779	mg			169.99
												+S	-S	Gold (Au)	7440-57-5		0.002412	mg			70.951
			+M	-M	Die Attach	0.312802	mg	+C	-C	Supplier	glue or soft solder	+S	-S	Silver (Ag)	7440-22-4		0.250242	mg			7,360.1
												+S	-S	2,6-Diglycidylphenyl all	13561-08-5		0.046920	mg			1,380.0
												+S	-S	1,4-bis (2,3-epoxyprop	2425-79-8		0.006256	mg			184.00
												+S	-S	Polyoxypropylenediam	9046-10-0		0.009384	mg			276.00
			+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	18.079	mg	+C	-C	Supplier	Moulding Compound	+S	-S	Epoxy Resin	na		1.355925	mg			39,880
												+S	-S	Phenol Resin	na		0.90395	mg			26,587
												+S	-S	Silicon Dioxide	60676-86-0		15.65641	mg			460,48
												+S	-S	Carbon-black	1333-86-4		0.090395	mg			2,658.7
								+C	-C	B	Bismuth/Bismuth Com	+S	-S	Bismuth	7440-69-9		0.072316	mg			2,126.9
			+M	-M	Finishing	0.000984	mg	+C	-C	Supplier	connections coating	+S	-S	Nickel (Ni)	7440-02-0		0.000902	mg			26.550
												+S	-S	Palladium (Pd)	7440-05-3		0.000057	mg			1.6999

+S	-S	Gold (Au)	7440-57-5		0.000024mg			0.7095
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