



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 * n/a	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	<input type="button" value="Duplicate Contact -> Authorized Representative"/>				
Authorized Representative * Gianfranco Santangelo	Title - Representative APM Materials Declaration Chan	Phone - Representative * n/a	Email - Representative * n/a	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
	L5991D013TR	A5Q7*U762ABZ	2010-03-22	A	MU1A	154.7	mg	Each
Alternate Recommendation	SO 16 .15 TO JEDEC MS-012			Alternate Item Comments	ECOPACK1/ROHS: ST internal reference CD1764629			

Manufacturing Process Information

Terminal Plating / Grid Array Material Nickel/Palladium/Gold (Ni/Pd/Au)	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 3	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 3
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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"

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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	A5Q7*U762ABZ	+M -M	Silicon Die	5.32	mg	+C -C	Supplier	Silicon die	+S -S	Silicon	7440-21-3		5.319	mg			999,81			
										+C -C	Supplier	die metallization	+S -S	Aluminium(Al)	7429-90-5		0.001	mg			188
			+M -M	Leadframe	44.998	mg	+C -C	Supplier	alloy	+S -S	Copper (Cu)	7440-50-8		44.939	mg			998,68			
										+S -S	Iron (Fe)	7439-89-6		0.021	mg			467			
										+S -S	Iron Phosphide (FeP)	26508-33-8		0.038	mg			844			
			+M -M	Leadframe coating	0.458	mg	+C -C	Supplier	coating	+S -S	Nickel (Ni)	7440-02-0		0.42	mg			917,03			
										+S -S	Palladium (Pd)	7440-05-3		0.027	mg			58,952			
										+S -S	Gold (Au)	7440-57-5		0.011	mg			24,017			
			+M -M	Die Attach	1.266	mg	+C -C	Supplier	glue	+S -S	Silver (Ag)	7440-22-4		0.949	mg			749,60			
										+S -S	Epoxy Cresol Novolak	29690-82-2		0.314	mg			248,02			
										+S -S	1-isopropyl-2,2-dimethyl	6846-50-0		0.003	mg			2,370			
			+M -M	Bonding wire	0.165	mg	+C -C	Supplier	Bonding wire	+S -S	Gold (Au)	7440-57-5		0.165	mg			1,000,0			
			+M -M	Encapsulation	102.493	mg	+C -C	Supplier	Moulding Compound	+S -S	Epoxy Cresol Novolak	29690-82-2		10.249	mg			99,997			
										+S -S	phenol resin	9003-35-4		5.125	mg			50,004			
										+S -S	Carbon Black	1333-86-4		1.025	mg			10,001			
										+S -S	Silica, vitreous	60676-86-0		81.994	mg			799,99			
							+C -C	B	Antimony/Antimony C	+S -S	Antimony Trioxide	1309-64-4		2.05	mg			20,001			
							+C -C	B	Brominated Flame Ret	+S -S	Brominated epoxy resin	68928-70-1		2.05	mg			20,001			