



# 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 * 2012-07-26	Response Document ID CGZW*95281KA				
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
		UFDFPN 2x3x0.6 8L Pitch 0.5	2012-07-26	A	Calamba	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 \*

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	UFD FPN 2x3x0.6 8L	+M	-M	Chip	0.951126	mg	+C	-C	Supplier	silicon die	+S	-S	Silicium (Si)	7440-21-3		0.950870	mg					59,427	
									+C	-C	Supplier	die metallization	+S	-S	Aluminium(Al)	7429-90-5		0.000153	mg					9.5997
														+S	-S	Copper (Cu)	7440-50-8		0.000051	mg				3.1999
														+S	-S	Titanium (Ti)	7440-32-6		0.000051	mg				3.1999
		+M	-M	Lead-frame	2.994	mg	+C	-C	Supplier	alloy	+S	-S	Copper (Cu)	7440-50-8			2.917653	mg					182,34	
														+S	-S	Iron (Fe)	7439-89-6		0.070239	mg				4,389.8
														+S	-S	Zinc (Zn)	7440-66-6		0.003592	mg				224.54
														+S	-S	Iron Phosphide (FeP)	26508-33-8		0.002514	mg				157.18
		+M	-M	Lead-frame Coat	0.013053	mg	+C	-C	Supplier	coating	+S	-S	Nickel (Ni)	7440-02-0			0.011967	mg					747.95	
														+S	-S	Palladium (Pd)	7440-05-3		0.000766	mg				47.889
														+S	-S	Gold (Au)	7440-57-5		0.000319	mg				19.987
		+M	-M	Die Attach	1.108977	mg	+C	-C	Supplier	glue or soft solder	+S	-S	Silver (Ag)	7440-22-4			0.970355	mg					60,645	
														+S	-S	polymer	28630-26-4		0.088718	mg				5,544.7
														+S	-S	aniline	67784-74-1		0.011089	mg				693.09
														+S	-S	epoxy resin	Proprietary		0.033269	mg				2,079.2
														+S	-S	Epoxy resin molecular w	Proprietary		0.005544	mg				346.54
		+M	-M	Wires	0.036131	mg	+C	-C	Supplier	Bonding wire	+S	-S	Gold (Au)	7440-57-5			0.036131	mg					2,258.1	
		+M	-M	Encapsulation	10.897	mg	+C	-C	Supplier	Moulding Compound	+S	-S	vitrous silica	60676-86-0			9.295141	mg					580,93	
														+S	-S	Phenol resin	na		0.381395	mg				23,836
														+S	-S	epoxy resin	na		0.43588	mg				27,241
														+S	-S	carbon black	1333-86-4		0.021794	mg				1,362.0
														+S	-S	2,2'-(3,3',5,5'-tetramet	85954-11-6		0.21794	mg				13,620
														+S	-S	Metal hydroxide	na		0.54485	mg				34,052

+M	-M	Finishing	0.000130	mg	+C	-C	Supplier	connections coating	+S	-S	Nickel (Ni)	7440-02-0		0.000119	mg			7.4795
									+S	-S	Palladium (Pd)	7440-05-3		0.000007	mg			0.4788
									+S	-S	Gold (Au)	7440-57-5		0.000003	mg			0.1998