



# 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>	<b>Form Type *</b> Distribute	<b>Declaration Class *</b> Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
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## Supplier Information

<b>Company Name *</b> ST MICROELECTRONICS	Company Unique ID	Unique ID Authority	<b>Response Date *</b> N/A	Response Document ID				
<b>Contact Name *</b>	Title - Contact	<b>Phone - Contact *</b>	<b>Email - Contact *</b>					
<b>Authorized Representative *</b> GIUSEPPE VITALI PALMA	Title - Representative AMS & IPD MD CHAMPION	<b>Phone - Representative *</b> N/A	<b>Email - Representative *</b> N/A		Supplier Comments or URL for Additional Information			
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	<b>Weight *</b>	UOM	Unit Type
	STD10NM50N	TODP*M251B62	2012-11-05	A	SH1A	300	mg	Each
Alternate Recommendation	PACKAGE: TO 252 DPAK		Alternate Item Comments		ECOPACK2/ROHS; BSA: CD00252823			

## Manufacturing Process Information

Terminal Plating / Grid Array Material <b>Matte Tin (Sn) - annealed</b>	Terminal Base Alloy <b>CU Alloy</b>	J-STD-020 MSL Rating <b>1</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  
**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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Import Data

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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 \*** 4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions

**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.

Exemption List Version EL-2006/690/EC

7a. Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

## 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
											-	+	
TODP*M251B62	Silicon Die	4.617	mg	Supplier	Silicon die	Silicon	7440-21-3		4.563	mg			988,30
				Supplier	die metallization	Aluminium(Al)	7429-90-5		0.01	mg			2,166
				Supplier	die back side metalliz	Titanium (Ti)	7440-32-6		0.002	mg			433
						Nickel (Ni)	7440-02-0		0.031	mg			6,714
						Silver (Ag)	7440-22-4		0.011	mg			2,382
Leadframe	159.856	mg	supplier	alloy	Copper (Cu)	7440-50-8		159.544	mg			998,04	
					Iron (Fe)	7439-89-6		0.16	mg		1,001		
					Iron Phosphide (FeP)	26508-33-8		0.048	mg		300		
					supplier	coating	Nickel (Ni)	7440-02-0		0.096	mg		601
Die Attach	2.116	mg	JIG R	Lead/Lead Compound	Lead (Pb)	7439-92-1	7a. Lead	2.021	mg			955,10	
					supplier	soft solder	Silver (Ag)	7440-22-4		0.053	mg		25,047
							Tin (Sn)	7440-31-5		0.042	mg		19,849
Bonding wire	0.257	mg	Supplier	Bonding wire	Aluminium (Al)	7429-90-5		0.17	mg			661,47	
					Aluminium (Al)	7429-90-5		0.086	mg		334,63		
					Magnesium (Mg)	7439-95-4		0.001	mg		3,891		
Encapsulation	131.661	mg	supplier	Moulding Compound	Epoxy Resin	Proprietary		3.95	mg			30,001	
					2,2'-((3,3',5,5'-tetramethy	EC 413-900-7		5.266	mg		39,997		
					phenol resin	Proprietary		6.583	mg		50,000		
					Silica, vitreous	60676-86-0		115.204	mg		875,00		
					Carbon black	1333-86-4		0.658	mg		4,998		
Finishing	1.493	mg	supplier	connection coating	Tin (Sn)	7440-31-5		1.493	mg			1,000,0	