



# Material Composition Declaration

© Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.

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
------------	--	---------------------------	--

## 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 APM 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
	STB30NF20L	TLD2*ML2HA62	2012-04-23	A	SH1A	1,500	mg	Each
Alternate Recommendation	PACKAGE: D2PAK		Alternate Item Comments		ECOPACK1/ROHS; BSA: CD00304615			

## 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>245 C</b>	Max Time at Peak Temperature <b>30 seconds</b>	Number of Reflow Cycles <b>3</b>
--	--	----------------------------------	---	---	-------------------------------------

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"**

Save the fields in this form to a file

Export Data

Import fields from a file into this form

Import Data

Locked

## 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	
											-	+		
TLD2*ML2HA62	Silicon Die	12.122	mg	Supplier	Silicon die	Silicon	7440-21-3		11.805	mg			973,84	
					die metallization	Aluminium(Al)	7429-90-5		0.213	mg			17,571	
					die back side metalliz	Titanium (Ti)	7440-32-6		0.006	mg			496	
						Nickel (Ni)	7440-02-0		0.081	mg			6,682	
						(Gold (Au))	7440-57-5		0.017	mg			1,402	
Leadframe	832.59	mg	Supplier	alloy	Copper (Cu)	7440-50-8		831.507	mg			998,70		
					Iron (Fe)	7439-89-6		0.833	mg			1,000		
					Iron Phosphide (FeP)	26508-33-8		0.25	mg			300		
Leadframe coating	2.63	mg	Supplier	coating	Nickel (Ni)	7440-02-0		2.457	mg			934,22		
					Phosphorus (P)	12185-10-3		0.173	mg			65,779		
Die Attach	4.182	mg	JIG R	Lead/Lead Compound	Lead (Pb)	7439-92-1	7a. Lead	3.993	mg			954,80		
					Supplier	soft solder	Silver (Ag)	7440-22-4		0.105	mg			25,108
							Tin (Sn)	7440-31-5		0.084	mg			20,086
Bonding wire	2.834	mg	Supplier	Bonding wire	Aluminium (Al)	7429-90-5		2.833	mg			999,64		
					Magnesium (Mg)	7439-95-4		0.001	mg			353		
Encapsulation	642.086	mg	Supplier	Moulding Compound	Silica, vitreous	60676-86-0		545.774	mg			850,00		
					Epoxy Cresol Novolak	29690-82-2		51.367	mg			80,000		
					Phenol resin	9003-35-4		25.683	mg			39,999		
					Supplier	Antimony/Antimony C	Antimony Trioxide	1309-64-4		7.705	mg			12,000
					JIG I	Brominated Flame Ret	Brominated Epoxy Resin	40039-93-8		9.631	mg			15,000
Supplier	Molding compound	Carbon Black	1333-86-4		1.926	mg			3,000					
Finishing	3.556	mg	Supplier	connection coating	Tin (Sn)	7440-31-5		3.556	mg			1,000,0		