



# 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 * <b>STMicroelectronics</b>	Company Unique ID	Unique ID Authority	Response Date * NA	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	<input type="button" value="Duplicate Contact -&gt; Authorized Representative"/>				
Authorized Representative * <b>GIOVANNI GIACOPELLO</b>	Title - Representative APM MD CHAMPION	Phone - Representative * NA	Email - Representative * NA	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
	STM811SW16F	DZW1*46VBAR3	2010-12-02	A	ZS1A	11	mg	Each
Alternate Recommendation	SOT 143 - 4L Package			Alternate Item Comments	ECOPACK2/ROHS BSA REF: CD00210291			

## Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
<b>Matte Tin (Sn)</b>	<b>CU Alloy</b>	<b>1</b>	<b>260 C</b>	<b>30 seconds</b>	<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' and**

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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	DZW1*46VBAR3		+M	-M	Silicon Die	1.176	mg	+C	-C	Supplier	Silicon die	+S	-S	Silicon (Si)	7440-21-3		1.176	mg			1,000,0
		+M	-M	Leadframe	3.246	mg	+C	-C	Supplier	Alloy	+S	-S	Iron	7439-89-6		1.846	mg				568,70	
											+S	-S	Manganese	7439-96-5		0.013	mg				4,005	
											+S	-S	Silicon	7440-21-3		0.007	mg				2,157	
											+S	-S	Silver	7440-22-4		0.033	mg				10,166	
											+S	-S	Nickel	7440-02-0		1.347	mg				414,97	
		+M	-M	Die Attach	0.076	mg	+C	-C	Supplier	Glue	+S	-S	Aluminium oxide	1344-28-1		0.018	mg				236,84	
											+S	-S	Diethylene glycol mono	112-15-2		0.024	mg				315,78	
											+S	-S	Epoxy resin	25068-38-6		0.004	mg				52,632	
											+S	-S	Epoxy resin	Proprietary		0.012	mg				157,89	
											+S	-S	Aromatic amine	Proprietary		0.018	mg				236,84	
		+M	-M	Bonding wire	0.1	mg	+C	-C	Supplier	Bonding wire	+S	-S	Gold (Au)	7440-57-5		0.1	mg				1,000,0	
		+M	-M	Encapsulation	5.992	mg	+C	-C	Supplier	Moulding Compound	+S	-S	Silica, vitreous	60676-86-0		5.11	mg				852,80	
											+S	-S	Phenol resin	Proprietary		0.21	mg				35,047	
											+S	-S	epoxy resin	Proprietary		0.24	mg				40,053	
											+S	-S	carbon black	1333-86-4		0.012	mg				2,003	
											+S	-S	Biphenyl epoxy resin	85954-11-6		0.12	mg				20,027	
											+S	-S	Zinc hydroxide	20427-58-1		0.06	mg				10,013	
											+S	-S	Magnesium hydroxide	1309-42-8		0.24	mg				40,053	
		+M	-M	Finishing	0.411	mg	+C	-C	Supplier	Connection coating	+S	-S	Sn	7440-31-5		0.411	mg				1,000,0	