



## Materials Declaration Form

<b>IPC Form Type *</b>	<b>1752 Distribute</b>	<b>Version</b>	<b>2</b>
<b>Sectionals *</b>	<b>Material Info Manufacturing Info</b>	<b>Subsectionals *</b>	<b>A-D</b>

*\* : Required Field*

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2013-08-06</b>
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Giovanni Giacopello	<b>Representative Title</b>	AMS & IPD Materials Declaration Champion
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/online_tech_support.html">http://www.st.com/web/en/support/online_tech_support.html</a>		

**Uncertainty Statement**

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 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
------------------------------	-------------	----------------------------	-----------------

**Legal Statement**

Supplier certifies that it gathered the provided information and 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. 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(s), 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(s), 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.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	DZWY*M6BAAEP	A	ZS1A	2013-08-06
Amount	UoM	Unit type	ST ECOPACK Grade	
16.50	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	2.9 - 1.6 - 1.05	5	gull wing	
Comment	Package: SOT 23-5			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	<b>true</b>
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList :REACH-18 June 2012				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				<b>true</b>
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	DZWM* M6BAAEP					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	0.38	mg	supplier	die	Silicon (Si)	7440-21-3		0.365	mg	960526	22121
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	5263	121
die (s)				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	2632	61
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.001	mg	2632	61
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.007	mg	18421	424
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.003	mg	7895	182
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.001	mg	2632	61
Lead-frame	Other inorganic materials	7.2	mg	Supplier	Alloy	Copper (Cu)	7440-50-8		6.936	mg	963333	420364
Lead-frame				Supplier	Alloy	Iron (Fe)	7439-89-6		0.162	mg	22500	9818
Lead-frame				Supplier	Alloy	Phosphorus (P)	12185-10-3		0.002	mg	278	121
Lead-frame				Supplier	Alloy	Zinc (Zn)	7440-66-6		0.009	mg	1250	545
Lead-frame				Supplier	Alloy	Nickel (Ni)	7440-02-0		0.083	mg	11528	5030
Lead-frame				Supplier	Alloy	Palladium (Pd)	7440-05-3		0.007	mg	972	424
Lead-frame				Supplier	Alloy	Gold (Au)	7440-57-5		0.001	mg	139	61
Die attach	Other inorganic materials	0.07	mg	Supplier	Glue	Aluminium oxide	1344-28-1		0.021	mg	300000	1273
Die attach				Supplier	Glue	Diethylene glycol monoethyl ether acetate	112-15-2		0.028	mg	400000	1697
Die attach				Supplier	Glue	Epoxy resin	25068-38-6		0.005	mg	71429	303
Die attach				Supplier	Glue	Epoxy resin	Proprietary		0.014	mg	200000	848
Die attach				Supplier	Glue	Aromatic amine	Proprietary		0.002	mg	28571	121
Bonding Wire	Precious metal	0.15	mg	Supplier	Bonding Wire	Gold (Au)	7440-57-5		0.15	mg	1000000	9091
encapsulation	Other inorganic materials	8.7	mg	Supplier	mold compound	Silica, vitreous	60676-86-0		7.421	mg	852989	449758
encapsulation				Supplier	mold compound	phenolic resin	Proprietary		0.305	mg	35057	18485
encapsulation				Supplier	mold compound	epoxy resin	Proprietary		0.348	mg	40000	21091
encapsulation				Supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.174	mg	20000	10545
encapsulation				Supplier	mold compound	carbon black	1333-86-4		0.017	mg	1954	1030
encapsulation				Supplier	mold compound	Zinc hydroxide	20427-58-1		0.087	mg	10000	5273
encapsulation				Supplier	mold compound	Magnesium hydroxide	1309-42-8		0.348	mg	40000	21091