



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D
<i>* : Required Field</i>			

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2013-01-07
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Giuseppe Vitali Palma	Representative Title	AMS & IPD Materials Declaration Champion
Representative Phone *	Refer to "Supplier Comment" section	Representative Email *	Refer to "Supplier Comment" section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/internet/com/support/online_tech_support.jsp		

Uncertainty Statement


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Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	Standard

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
	HVWX*0431BB6	A	ZS1A	2013-01-07
Amount	UoM	Unit type	ST ECOPACK Grade	
10.364	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	2.8x1.5x0.9	3	gull wing	
Comment	Package: SOT 23 3 LDS			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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-20th June 2013				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	HVWX*0431BB6					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon die	Other inorganic materials	0.26	mg	supplier	Silicon die	Silicon (Si)	7440-21-3		0.26	mg	1000000	25087
Lead frame	Copper and its alloy	2.352	mg	supplier	Alloy	Copper	7440-50-8		2.27	mg	965136	219027
Lead frame				supplier	Alloy	Iron	7439-89-6		0.053	mg	22534	5114
Lead frame				supplier	Alloy	Lead	7439-92-1		0.001	mg	425	96
Lead frame				supplier	Alloy	Phosphorus	7723-14-0		0.001	mg	425	96
Lead frame				supplier	Alloy	Zinc	7440-66-6		0.003	mg	1276	289
Lead frame				supplier	Alloy	Silver	7440-22-4		0.024	mg	10204	2316
Die attach	Other organic materials	0.056	mg	supplier	Glue	Silver	7440-22-4		0.024	mg	428571	2316
Die attach				supplier	Glue	methylene diacrylate	42594-17-2		0.014	mg	250000	1351
Die attach				supplier	Glue	Dicyclopentenylxyethyl methacrylate	68586-19-6		0.006	mg	107143	579
Die attach				supplier	Glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.006	mg	107143	579
Die attach				supplier	Glue	Palladium (Pd)	7440-05-3		0.003	mg	53571	289
Die attach				supplier	Glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.003	mg	53571	289
Bonding wire	Other inorganic materials	0.03	mg	supplier	Bonding wire	Cu	7440-50-8		0.029	mg	966667	2798
Bonding wire				supplier	Bonding wire	Palladium (Pd)	7440-05-3		0.001	mg	33333	96
Encapsulation	Other organic materials	7.466	mg	supplier	Molding compound	Epoxy Resin-1	Proprietary		0.223	mg	29869	21517
Encapsulation				supplier	Molding compound	Epoxy Resin-2	Proprietary		0.223	mg	29869	21517
Encapsulation				supplier	Molding compound	Phenol resin	Proprietary		0.334	mg	44736	32227
Encapsulation				supplier	Molding compound	Silica	60676-86-0		6.486	mg	868738	625820
Encapsulation				supplier	Molding compound	Carbon Black	1333-86-4		0.015	mg	2009	1447
Encapsulation				supplier	Molding compound	Zinc hydroxide	20427-58-1		0.036	mg	4822	3474
Encapsulation				supplier	Molding compound	Magnesium hydroxide	1309-42-8		0.149	mg	19957	14377
Finishing	Other inorganic materials	0.2	mg	supplier	Connection coating	Tin	7440-31-5		0.2	mg	1000000	19298