



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 *	2013-09-23
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
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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
	MZ80*KS33AA6	A	SH1A	2013-09-23
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
Not Applicable ; if coating is used	bright, annealed Tin/Silver/Bismuth	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10.2X9.1X4.5	6	Through-hole
Comment	Package: TO 220 CU Wire on CU		

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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)	true
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
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList :REACH-19 December 2012				
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	MZ80*KS33AA6					
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	2.428	mg	supplier	die	Silicon (Si)	7440-21-3		2.372	mg	976936	1248
				supplier	metallization	Aluminium (Al)	7429-90-5		0.03	mg	12356	16
				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.01	mg	4119	5
						Silicon Oxide(SiO2)	7631-86-9		0.014	mg	5766	7
					back side metallization	Nickel (Ni)	7440-02-0		0.002	mg	824	1
Leadframe	Copper & its alloys	1247.312	mg	supplier	alloy	Copper (Cu)	7440-50-8		1245.69	mg	998700	655626
						Iron (Fe)	7439-89-6		0.574	mg	460	302
						Iron Phosphide (FeP)	26508-33-8		1.048	mg	840	552
Soft solder	Other organic materials	2.237	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.136	mg	954850	1124
				supplier	solder	Silver (Ag)	7440-22-4		0.056	mg	25034	29
						Tin (Sn)	7440-31-5		0.045	mg	20116	24
Bonding wire	Other inorganic materials	0.257	mg	supplier	wire	Copper (Cu)	7440-50-8		0.257	mg	1000000	135
encapsulation	Other organic materials	641.404	mg	supplier	mold compound	Antimony Trioxide	1309-64-4		12.828	mg	20000	6752
						Silica, vitreous	60676-86-0		484.26	mg	755000	254874
						Quartz	14808-60-7		3.207	mg	5000	1688
						Phenol resin	9003-35-4		35.277	mg	55000	18567
						Carbon Black	1333-86-4		3.207	mg	5000	1688
						Epoxy Cresol Novolak	29690-82-2		99.418	mg	155001	52325
connections coating	Solder	6.362	mg	JIG I		Brominated Epoxy Resin	68928-70-1		3.207	mg	5000	1688
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	9348