



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 *	2013-09-17
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
	XLDZ*MM2LB62	A	SH1A	2013-09-17
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 2	

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 o	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10X9.1X4.5	4	Through-hole
Comment	Package: TO 220 AB NON ISOL		

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	XLDZ*MM2LB2						
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	24.041	mg	supplier	die	Silicon (Si)	7440-21-3		22.613	mg	940601	11596	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.936	mg	38933	480	
						Titanium (Ti)	7440-32-6		0.021	mg	874	11	
						Tungsten (W)	7440-33-7		0.033	mg	1373	17	
						Nickel (Ni)	7440-02-0		0.102	mg	4243	52	
					supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.138	mg	5740	71
					supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	458	6
							Gold (Au)	7440-57-5		0.033	mg	1373	17
							Nickel (Ni)	7440-02-0		0.154	mg	6406	79
				Leadframe	Copper & Its alloys	1143.427	mg	supplier	alloy	Copper (Cu)	7440-50-8		1141.927
		Iron (Fe)	7439-89-6						0.526	mg	460	270	
		Iron Phosphide (FeP)	26508-33-8						0.96	mg	840	492	
	supplier	metallization	Nickel (Ni)					7440-02-0		0.013	mg	11	7
			Phosphorus (P)					12185-10-3		0.001	mg	1	1
Soft solder	Other organic materials	14.821	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	14.154	mg	954996	7258	
				supplier	solder	Silver (Ag)	7440-22-4		0.371	mg	25032	190	
						Tin (Sn)	7440-31-5		0.296	mg	19972	152	
Bonding wire	Other inorganic materials	3.561	mg	supplier	wire	Aluminium (Al)	7429-90-5		3.56	mg	999719	1826	
						Magnesium (Mg)	7439-95-4		0.001	mg	281	1	
						Silica, vitreous	60676-86-0		617.62	mg	869999	316728	
						Epoxy resin	Proprietary		70.991	mg	100000	36406	
						Phenol resin	Proprietary		17.748	mg	25000	9102	
encapsulation	Other organic materials	709.909	mg			Carbon Black	1333-86-4		3.55	mg	5001	1821	
connections coating	Solder	4.241	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.241	mg	1000000	2175	