



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2013-02-15</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>	<b>Giuseppe Vitali Palma</b>	<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/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
	BLLW*F54SA2Y	A	LGGA	2013-02-15
Amount	UoM	Unit type	ST ECOPACK Grade	
4430.00	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	15.75X20.15X5.15	3	Through-hole	
Comment	Package: TO 247			

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

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	BLW*F54SA2Y					
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	10.737	mg	supplier	die	Silicon (Si)	7440-21-3		10.099	mg	940579	2280
				supplier	metallization	Aluminium (Al)	7429-90-5		0.418	mg	38931	94
						Titanium (Ti)	7440-32-6		0.009	mg	838	2
						Tungsten (W)	7440-33-7		0.015	mg	1397	3
						Nickel (Ni)	7440-02-0		0.045	mg	4191	10
				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.062	mg	5774	14
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	466	1
						Gold (Au)	7440-57-5		0.015	mg	1397	3
						Nickel (Ni)	7440-02-0		0.069	mg	6426	16
				Leadframe	Copper & Its alloys	2720.611	mg	supplier	alloy	Copper (Cu)	7440-50-8	
		Iron (Fe)	7439-89-6						1.246	mg	458	281
		Iron Phosphide (FeP)	26508-33-8						2.275	mg	836	514
supplier	metallization	Nickel (Ni)	7440-02-0						11.968	mg	4399	2702
		Phosphorus (P)	12185-10-3						0.074	mg	27	17
Soft solder	Other organic materials	7.307	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	6.978	mg	954975	1575
				supplier	solder	Silver (Ag)	7440-22-4		0.183	mg	25044	41
						Tin (Sn)	7440-31-5		0.146	mg	19981	33
Bonding wire	Other inorganic materials	4.525	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.525	mg	1000000	1021
						Silica, vitreous	60676-86-0		1462.142	mg	870000	330055
encapsulation	Other organic materials	1680.623	mg	supplier	mold compound	Epoxy resin	Proprietary		168.062	mg	100000	37937
						Phenol resin	Proprietary		42.016	mg	25000	9484
						Carbon Black	1333-86-4		8.403	mg	5000	1897
						Tin (Sn)	7440-31-5		6.197	mg	1000000	1399
connections coating	Solder	6.197	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.197	mg	1000000	1399