



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2013-09-18
<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>	Antonella Lanzafame	<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>	true	<b>Legal Declaration *</b>	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
	7BVT*248VBL1	A	SH1A	2013-09-18
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	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2,15.5,4.5	3	Through-hole	
Comment	TO 220 I CLIP			

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)
7c-1	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices

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	7BVT*248VBL1					
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	15.852	mg	supplier	die	Silicon (Si)	7440-21-3		14.097	mg	889288	7419
die (s)				supplier	metallization	Nickel (Ni)	7440-02-0		0.179	mg	11292	94
die (s)				supplier	metallization	Gold (Au)	7440-57-5		0.039	mg	2460	21
die (s)				supplier	passivation	Alumina	1344-28-1		0.114	mg	7192	60
die (s)				supplier	passivation	Lead silicate Glass	65997-18-4	7c-I-Electrical and	1.022	mg	64471	538
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.018	mg	1136	9
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.383	mg	24161	202
Leadframe	Copper & its alloys	1633.687	mg	supplier	alloy	Copper (Cu)	7440-50-8		1615.428	mg	988823	850225
Leadframe				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		3.246	mg	1987	1708
Leadframe				supplier	alloy	Cobalt (Co)	7440-48-4		4.545	mg	2782	2392
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		10.468	mg	6408	5509
Soft solder	Solder	10.336	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	9.561	mg	925019	5032
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.517	mg	50019	272
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.258	mg	24961	136
Bonding wire	Other inorganic materials	31.625	mg	supplier	wire	Copper (Cu)	7440-50-8		31.625	mg	1000000	16645
encapsulation	Other Organic Materials	111.345	mg	supplier	mold compound	Silica, vitreous	60676-86-0		82.617	mg	741991	43483
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		5.568	mg	50007	2931
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.891	mg	8002	469
encapsulation				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		12.248	mg	110000	6446
encapsulation				supplier	mold compound	Others	Proprietary		10.021	mg	90000	5274
connections coating	Solder	6.314	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323
subelement		90.841	mg	R	Ceramic isolator	Alumina (Al2O3)	Alumina (Al2O3)		89.2	mg	981935	46947
subelement				supplier	Ceramic isolator	Nickel (Ni)	Nickel (Ni)		1.07	mg	11779	563
subelement				supplier	Ceramic isolator	Gold (Au)	Gold (Au)		0.571	mg	6286	301