



## 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>	2013-11-08
<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
	HZC4*UL47BA5	A	SH1A	2013-11-08
Amount	UoM	Unit type	ST ECOPACK Grade	
331.30	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	
SMC	6.4,6.0,2.2	5	S bend	
Comment	PPACK 5 LEADS; Md valid for: LD49300PT08R.			

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-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	HZC4*UL47BA5					
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	1.123	mg	supplier	die	Silicon (Si)	7440-21-3		1.064	mg	947462	3212
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.011	mg	8795	33
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.009	mg	8014	27
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	1781	6
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.019	mg	16919	57
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.006	mg	5343	18
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.003	mg	2671	9
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	890	3
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1781	6
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.006	mg	5343	18
Leadframe	Copper & its alloys	154.911	mg	supplier	alloy	Copper (Cu)	7440-50-8		152.483	mg	984326	460257
Leadframe				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.306	mg	1975	924
Leadframe				supplier	alloy	Cobalt (Co)	7440-48-4		0.429	mg	2769	1295
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.571	mg	3686	1724
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		1.122	mg	7243	3387
Soft solder	Solder	0.567	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	0.542	mg	955908	1636
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.014	mg	24691	42
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.011	mg	19400	33
Bonding wire	Other inorganic materials	0.566		supplier	wire	Gold (Au)	7440-57-5		0.566	mg	1000000	1708
encapsulation	Other Organic materials	164.133	mg	supplier	mold compound	Epoxy Resin	Proprietary		4.924	mg	30000	14863
encapsulation				supplier	mold compound	2,2'-(3,3',5,5'-tetramethyl-1,1'-biphenyl)-4,4'	EC 413-900-7		6.566	mg	40004	19819
encapsulation				supplier	mold compound	phenol resin	Proprietary		8.206	mg	49996	24769
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		143.616	mg	874998	433492
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.821	mg	5002	2478