



## 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>	2014-10-15
<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
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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
	HZC4*NC05FC2	A	SH1A	2014-10-15
Amount	UoM	Unit type	ST ECOPACK Grade	
320.00	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 CP:LD29150PT50R.			

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-16th June 2014				
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*NC05FC2						
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	3.298	mg	supplier	die	Silicon (Si)	7440-21-3		3.177	mg	963311	9928	
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.05	mg	15161	156	
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.014	mg	4245	44	
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.026	mg	7884	81	
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.019	mg	5761	59	
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.008	mg	2426	25	
die (s)				supplier	passivation	Alcoxysilane	proprietary		0.001	mg	303	3	
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	303	3	
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.002	mg	606	6	
Leadframe	Copper & its alloys	159.145	mg	supplier	alloy	Copper (Cu)	7440-50-8		157.762	mg	991310	493006	
Leadframe				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.317	mg	1992	991	
Leadframe				supplier	alloy	Cobalt (Co)	7440-48-4		0.444	mg	2790	1388	
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.618	mg	3883	1931	
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.004	mg	25	13	
Soft solder		1.67	mg		JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.595	mg	955090	4984
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.042	mg	25150	131	
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.033	mg	19760	103	
Bonding wire	Other inorganic materials			supplier	wire	Copper (Cu)	7440-50-8		0.304	mg	1000000	950	
encapsulation	Other Organic materials	155.001	mg	supplier	mold compound	Epoxy Resin	Proprietary		4.65	mg	30000	14531	
encapsulation				supplier	mold compound	2,2'-(3,3',5,5'-tetramethyl-(1,1'-biphenyl)-4,4'	EC 413-900-7		6.2	mg	40000	19375	
encapsulation				supplier	mold compound	phenol resin	Proprietary		7.75	mg	50000	24219	
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		135.626	mg	875001	423831	
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.775	mg	5000	2422	
connections coating	Solder	0.582	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.582	mg	1000000	1819	