



## 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  <i>* : Required Field</i>

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2015-04-20
<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>	Giovanni Giacobello	<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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<b>Legal Statement</b>			
<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
	HZGR*KF05FC1	A	SH1A	2015-04-20
Amount	UoM	Unit type	ST ECOPACK Grade	
331.00	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	
Not Applicable ; if coating is used c	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	6.085X6.614X2.3	3	gull wing	
Comment	Package: TO-252 DPAK Cu Wire; MDF valid for KF50BDT-TR			

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	HZGR*KF05FC1					
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	3.023	mg	supplier	die	Silicon (Si)	7440-21-3		2.928	mg	968574	8838
die (s)				supplier	metallization	Aluminum (Al)	7429-90-5		0.037	mg	12239	112
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.013	mg	4300	39
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.017	mg	5624	51
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	662	6
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.006	mg	1985	18
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.02	mg	6616	60
Leadframe	Copper & its alloys	201.236	mg	supplier	alloy	Copper (Cu)	7440-50-8		200.974	mg	998698	606622
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.093	mg	462	281
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.169	mg	840	510
Soft solder	Solder	2.622	mg	JIG Table A	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.504	mg	954996	7558
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.066	mg	25172	199
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.052	mg	19832	157
Bonding wire	Other inorganic materials	0.183	mg	supplier	wire	Copper (Cu)	7440-50-8		0.183	mg	1000000	552
encapsulation	Other inorganic materials	123.191	mg	supplier	mold compound	Epoxy Resin	Proprietary		3.696	mg	30002	11156
encapsulation				supplier	mold compound	2,2'-((3,3',5,5'-tetramethyl-(1,1'-biphenyl)-4,4'	EC 413-900-7		4.927	mg	39995	14872
encapsulation				supplier	mold compound	phenol resin	Proprietary		6.16	mg	50004	18593
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		107.792	mg	874999	325361
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.616	mg	5000	1859
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3154