



## 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>			

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2013-03-22
<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
LD2985BM33R	HVVV*NK33FC3	A	ZS1A	2013-03-22
Amount		UoM	Unit type	ST ECOPACK Grade
17.10		mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SOT	2.9,1.60,1.10	5	gull wing	
Comment	SOT 23 5L			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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)	false
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 Dec 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	HVWV*NK33FC3					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon Die	Other inorganic materials	0.959	mg	supplier	Silicon Die	Silicon (Si)	7440-21-3		0.925	mg	973684	54094
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	13684	760
Silicon Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.004	mg	4211	234
Silicon Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.008	mg	8421	468
Die Attach	Solder	0.087	mg	supplier	Glue	Silver	7440-22-4		0.064	mg	735632	9743
Die Attach				supplier	Glue	Carbocyclic Acrylates	Proprietary		0.007	mg	80460	409
Die Attach				supplier	Glue	Bismaleimide resin	Proprietary		0.004	mg	45977	234
Die Attach				supplier	Glue	2-preponoic acid, 2-methyl	68586-19-6		0.004	mg	45977	234
Die Attach				supplier	Glue	Additive	Proprietary		0.008	mg	91954	468
Lead-frame	Copper & Its alloys	7.84	mg	supplier	Alloy	Copper	7440-50-8		7.472	mg	960041	436959
Lead-frame				supplier	Alloy	Iron	7439-89-6		0.175	mg	22485	10234
Lead-frame				supplier	Alloy	Phosphorus	7723-14-0		0.005	mg	642	292
Lead-frame				supplier	Alloy	Zinc	7440-66-6		0.015	mg	1927	877
Lead-frame				supplier	metallization	Nickel	7440-02-0		0.095	mg	12206	5556
Lead-frame				supplier	metallization	Palladium	7440-05-3		0.015	mg	1927	877
Lead-frame				supplier	metallization	Gold (Au)	7440-57-5		0.006	mg	771	351
Bonding wire	Other inorganic materials	0.2	mg	supplier	wire	Gold (Au)	7440-57-5		0.199	mg	1000000	11637
Encapsulation	Other Organic Materials	8.141	mg	supplier	Molding compound	Epoxy resin-1	Proprietary		0.239	mg	29576	13977
Encapsulation				supplier	Molding compound	Epoxy resin-2	Proprietary		0.239	mg	29576	13977
Encapsulation				supplier	Molding compound	Phenol resin	Proprietary		0.36	mg	44549	21053
Encapsulation				supplier	Molding compound	Silica	60676-86-0		7.058	mg	873407	412749
Encapsulation				supplier	Molding compound	Carbon Black	1333-86-4		0.016	mg	1980	936
Encapsulation				supplier	Molding compound	Others (max2%)	-		0.169	mg	20913	9883