



## 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>	2016-03-29
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giacopello	<b>Representative Title</b>	IPD MD 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/web/en/support/support.html">http://www.st.com/web/en/support/support.html</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
LK112M80TR	HVWV*KN08FC1	A	ZS1A	2016-03-29
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		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.8 - 1.5 - 0.9	5	gull wing	
Comment	Package: SOT 23 5L			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	true
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-17th December 2015				
Query				Response
1 - Product(s) 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*KN08FC1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	0.768	mg	supplier	die	Silicon (Si)	7440-21-3		0.738	mg	960887	43099
				supplier	metallization	Aluminum (Al)	7429-90-5		0.011	mg	14342	643
				supplier	Passivation	Silicon Nitride	12033-89-5		0.003	mg	3911	175
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	7823	351
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.010	mg	13038	585
Leadframe	Copper & its alloys	7.442	mg	supplier	alloy	Copper (Cu)	7440-50-8		7.171	mg	963585	419357
				supplier	alloy	Iron (Fe)	7439-89-6		0.167	mg	22440	9766
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	269	117
				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1209	526
				supplier	metallization	Nickel (Ni)	7440-02-0		0.085	mg	11422	4971
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	941	409
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	134	58
				supplier	glue	Silver (Ag)	7440-22-4		0.049	mg	700000	2865
Die attach	Other Organic Materials	0.070	mg	supplier	glue	methylene diacrylate	42594-17-2		0.017	mg	242857	994
				supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.002	mg	28571	117
				supplier	glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.002	mg	28571	117
				supplier	wire	Gold (Au)	7440-57-5		0.155	mg	1000000	9064
Encapsulation	Other Organic Materials	8.665	mg	supplier	molding compound	Silica, vitreous	60676-86-0		7.780	mg	897865	454971
				supplier	molding compound	phenolic resin	29690-82-2		0.320	mg	36930	18713
				supplier	molding compound	epoxy resin	25068-38-6		0.365	mg	42123	21345
				supplier	molding compound	Biphenyl epoxy resin	85954-11-6		0.182	mg	21004	10643
				supplier	molding compound	carbon black	1333-86-4		0.018	mg	2077	1053