



## 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>	2017-08-29
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana San Biagio	<b>Representative Title</b>	AMG 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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<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
	RVWV*U1Q7AA5	A	ZS1A	2017-08-29
Amount	UoM	Unit type	ST ECOPACK Grade	
16.00	mg	Each	ECOPACK® 2	
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant		

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	
ting is used or other bulk terminat	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	2.9x1.6x1.05	5	gull wing	
Comment	Package: WV SOT 23 5L; MDF valid for LDK320M50R			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
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
Exemption Id.	Description

QueryList : REACH-7th July 2017				
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	RVVV*U1Q7AA5					
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	0.441	mg	supplier	die	Silicon (Si)	7440-21-3		0.417	mg	945578	26063
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	11338	313
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	9070	250
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2268	63
				supplier	Passivation	Silicon Oxide	7631-86-9		0.009	mg	20408	563
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.005	mg	11338	313
Leadframe	Copper & its alloys	7.092	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.832	mg	963339	427000
				supplier	alloy	Iron (Fe)	7439-89-6		0.159	mg	22420	9938
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	282	125
				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1269	563
				supplier	metallization	Nickel (Ni)	7440-02-0		0.082	mg	11562	5125
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	987	438
Die attach	Other Organic Materials	0.067	mg	supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	141	63
				supplier	glue	Silver (Ag)	7440-22-4		0.046	mg	686567	2875
				supplier	glue	methylene diacrylate	42594-17-2		0.017	mg	253731	1063
				supplier	glue	Dicyclopentenylxyethyl methacrylate	68586-19-6		0.002	mg	29851	125
				supplier	glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.002	mg	29851	125
				supplier	wire	Copper (Cu)	7440-50-8		0.146	mg	100000	9125
Encapsulation	Other Organic Materials	8.254	mg	supplier	molding compound	Silica, vitreous	60676-86-0		7.410	mg	897747	463125
				supplier	molding compound	phenolic resin	25068-38-6		0.304	mg	36831	19000
				supplier	molding compound	epoxy resin	29690-82-2		0.348	mg	42161	21750
				supplier	molding compound	Biphenyl epoxy resin	85954-11-6		0.174	mg	21081	10875
				supplier	molding compound	carbon black	1333-86-4		0.018	mg	2181	1125