



## Materials Declaration Form

<b>IPC</b>	<b>1752</b>	<b>Version</b>	<b>2</b>
<b>Form Type *</b>	<b>Distribute</b>		
<b>Sectionals *</b>	<b>Material Info</b> <b>Manufacturing Info</b>	<b>Subsectionals *</b>	<b>A-D</b>
<i>* : Required Field</i>			

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2018-06-15</b>
<b>Company Unique ID</b>	<b>NL 008751171B01</b>		
<b>Contact Name *</b>	Refer to Supplier Comment section		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>	<b>Floriana SAN BIAGIO</b>	<b>Representative Title</b>	<b>AMS MD CHAMPION</b>
<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>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>

**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
	RVW8*U1F3AB5	A	ZS1A	2018-06-15
Amount	UoM	Unit type	ST ECOPACK Grade	
6	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 ( in each organic material)		

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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		


  
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Package Designator	Size	Nbr of instances	Shape	
SOT	2x1.26x0.93	5	gull wing	
Comment	W8 SOT 323 5LDS; MDF valid for LDK220C27R			

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-15th January 2018				
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	RW8*U1F3AB5				5000003.0	1000332.0	
note : Substance present with less 0.001mg will not be declared in this document													
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)	
Die	M-011 Other inorganic materials	0.351	mg	supplier	die	Silicon (Si)	7440-21-3		0.328	mg	934473	54667	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	14245	833	
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	11396	667	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2849	167	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	22792	1333	
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.005	mg	14245	833	
				supplier									
Leadframe	M-004 Copper and its alloys	1.379	mg	supplier	Alloy	Copper (Cu)	7440-50-8		1.329	mg	963742	221500	
				supplier	Alloy	Iron (Fe)	7439-89-6		0.031	mg	22480	5167	
				supplier	Alloy	Zinc (Zn)	7440-66-6		0.002	mg	1450	333	
				supplier	metallization	Nickel (Ni)	7440-02-0		0.016	mg	11603	2667	
				supplier	metallization	Palladium (Pd)	7440-05-3		0.001	mg	725	167	
				supplier									
				supplier									
Die attach	M-015 Other organic materials	0.052	mg	supplier	Glue	Silver (Ag)	7440-22-4		0.041	mg	788462	6833	
				supplier	Glue	Carbocyclic Acrylates	proprietary		0.005	mg	96154	833	
				supplier	Glue	Bismaleimide resin	35325-39-4		0.002	mg	38462	333	
				supplier	Glue	2-preponic acid, 2-methyl	68586-19-6		0.002	mg	38462	333	
				supplier	Glue	Additive	proprietary		0.002	mg	38462	333	
Bonding wires	M-011 Other inorganic materials	0.017	mg	supplier	wire	Copper (Cu)	7440-50-8		0.017	mg	1000000	2833	
Encapsulation	M-015 Other organic materials	4.203	mg	supplier	Molding Compound	Epoxy Resin-1	29690-82-2		0.126	mg	29979	21000	
				supplier	Molding Compound	Epoxy Resin-2	Proprietary		0.126	mg	29979	21000	
				supplier	Molding Compound	Phenol resin	25068-38-6		0.189	mg	44968	31500	
				supplier	Molding Compound	Silica	60676-86-0		3.670	mg	873186	611667	
				supplier	Molding Compound	Carbon Black	1333-86-4		0.008	mg	1903	1333	
supplier	Molding Compound	Others	Proprietary		0.084	mg	19986	14000					