



## 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>	2018-03-23
<b>Company Unique ID</b>	NL 008751171801		
<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>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS 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
	HBZU*F126AD9	A	ZW1A	2018-03-23
Amount	UoM	Unit type	ST ECOPACK Grade	
44	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	4x4x1	20	flat	
Comment	ZU VFQFPN 20 4x4x1.0 PITCH 0.50; MDF valid for SPIRIT1QTR			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HBZU*F126AD9				5000000.0	999978.0
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	1.946	mg	supplier	die	Silicon (Si)	7440-21-3		1.827	mg	938849	41523
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	3083	136
				supplier	metallization	Copper (Cu)	7440-50-8		0.053	mg	27235	1205
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.008	mg	4111	182
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	1028	45
				supplier	Passivation	Silicon Nitride	12033-89-5		0.011	mg	5653	250
				supplier	Passivation	Silicon Oxide	7631-86-9		0.039	mg	20041	886
Leadframe	M-004 Copper and its alloys	23.718	mg	supplier	alloy	Copper (Cu)	7440-50-8		22.736	mg	958597	516727
				supplier	alloy	Iron (Fe)	7439-89-6		0.548	mg	23105	12455
				supplier	alloy	Zinc (Zn)	7440-66-6		0.028	mg	1181	636
				supplier	alloy	Phosphorus (P)	7723-14-0		0.007	mg	295	159
				supplier	metallization	Nickel (Ni)	7440-02-0		0.390	mg	16443	8864
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	295	159
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	42	23
Die attach	M-015 Other organic materials	0.453	mg	supplier	metallization	Silver (Ag)	7440-22-4		0.001	mg	42	23
				supplier	glue	Carbocyclic Acrylates	Proprietary		0.045	mg	99338	1023
				supplier	glue	Silver (Ag)	7440-22-4		0.386	mg	852097	8773
				supplier	glue	2-Propenoic acid,2-methyl-,2[[2,3,3a,4,7,7a]oxepino[2,3-b]furan-5-yl]ethyl ester	68586-19-6		0.020	mg	44150	455
				supplier	glue	2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.002	mg	4415	45
Bonding wires	M-008 Precious metals	0.278	mg	supplier	wire	Gold (Au)	7440-57-5		0.278	mg	1000000	6318
Encapsulation	M-015 Other organic materials	17.604	mg	supplier	molding compound	Epoxy resin	29690-82-2		0.880	mg	49989	20000
				supplier	molding compound	Silica (Amorphous) A	60676-86-0		13.203	mg	750000	300068
				supplier	molding compound	Phenol Resin	25068-38-6		0.616	mg	34992	14000
				supplier	molding compound	Silica (Amorphous) B	7631-86-9		2.817	mg	160020	64023
				supplier	molding compound	Carbon Black	1333-86-4		0.088	mg	4999	2000