



## 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>	2017-11-03
<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>	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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**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
	CBND*F154BD9	A	ZW1A	2017-11-03
Amount	UoM	Unit type	ST ECOPACK Grade	
50.24	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	24	flat	
Comment	Package: ND VFQFPN 4x4x1.0 24 PITCH 0.5; MDF valid for S2-LPQTR			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	CBND*F154BD9				5000004.0	1000001.0				
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	2.254	mg	supplier	die	Silicon (Si)	7440-21-3		2.114	mg	937888	42078				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	3106	139				
				supplier	metallization	Copper (Cu)	7440-50-8		0.062	mg	27507	1234				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.009	mg	3993	179				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	1331	60				
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	444	20				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.013	mg	5768	259				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.045	mg	19965	896				
				Leadframe	M-004 Copper and its alloys	23.352	mg	supplier	alloy	Copper (Cu)	7440-50-8		22.326	mg	956064	444387
								supplier	alloy	Iron (Fe)	7439-89-6		0.539	mg	23082	10729
supplier	alloy	Zinc (Zn)	7440-66-6						0.029	mg	1242	577				
supplier	alloy	Phosphorus (P)	7723-14-0						0.019	mg	814	378				
supplier	metallization	Nickel (Ni)	7440-02-0						0.425	mg	18200	8459				
supplier	metallization	Palladium (Pd)	7440-05-3						0.011	mg	471	219				
supplier	metallization	Gold (Au)	7440-57-5						0.001	mg	43	20				
supplier	metallization	Silver (Ag)	7440-22-4						0.002	mg	86	40				
Die attach	M-015 Other organic materials	0.497	mg					supplier	glue	Silver (Ag)	7440-22-4		0.469	mg	943662	9335
								supplier	glue	Z-Propenoic acid,2-methyl-,2[[2,3,3a,4,7,7a]or	68586-19-6		0.025	mg	50302	498
				supplier	glue	Bis(alpha,alpha-Dimethylbenzyl)peroxide	80-43-3		0.003	mg	6036	60				
				supplier	wire	Gold (Au)	7440-57-5		0.246	mg	1000000	4896				
Bonding wires	M-008 Precious metals	0.246	mg	supplier	wire	Gold (Au)	7440-57-5		0.246	mg	1000000	4896				
				supplier	mold compound	Epoxy resin	29690-82-2		1.195	mg	50019	23786				
Encapsulation	M-011 Other inorganic materials	23.891	mg	supplier	mold compound	Silica (Amorphous) A	60676-86-0		17.918	mg	749990	356648				
				supplier	mold compound	Phenol Resin	25068-38-6		0.836	mg	34992	16640				
				supplier	mold compound	Silica (Amorphous) B	7631-86-9		3.823	mg	160018	76095				
				supplier	mold compound	Carbon Black	1333-86-4		0.119	mg	4981	2369				