



## 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  * : Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-05-22
<b>Company Unique ID</b>	NL 008751171B01		
<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

**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
	8MND*U1K8AC5	A	CA2A	2018-05-22
Amount	UoM	Unit type	ST ECOPACK Grade	
44	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		
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	ND VFQFPN 4x4x1.0 24 PITCH 0.5; MDF valid for STKNXTR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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
-	-			0
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
-	-	0.00		

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	8MND*U1K8AC5				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	3.954	mg	supplier	die	Silicon (Si)	7440-21-3		3.707	mg	937532	84250				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.045	mg	11381	1023				
				supplier	metallization	Tungsten (W)	7440-33-7		0.036	mg	9105	818				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.010	mg	2529	227				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.078	mg	19727	1773				
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.003	mg	759	68				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.009	mg	2276	205				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	4299	386				
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.001	mg	253	23				
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.048	mg	12140	1091				
				Leadframe	M-004 Copper and its alloys	16.777	mg	supplier	alloy	Copper (Cu)	7440-50-8		16.273	mg	969959	369841
supplier	alloy	Iron (Fe)	7439-89-6						0.383	mg	22829	8705				
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.023	mg	1371	523				
supplier	alloy	Zinc (Zn)	7440-66-6						0.020	mg	1192	455				
supplier	metallization	Nickel (Ni)	7440-02-0						0.071	mg	4232	1614				
supplier	metallization	Palladium (Pd)	7440-05-3						0.005	mg	298	114				
supplier	metallization	Gold (Au)	7440-57-5						0.002	mg	119	45				
Die attach	M-015 Other organic materials	1.452	mg					supplier	glue	Silver (Ag)	7440-22-4		1.162	mg	800275	26409
								supplier	glue	methylene diacrylate	42594-17-2		0.238	mg	163912	5409
								supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.036	mg	24793	818
								supplier	glue	Epoxycyclohexylethyltrimethoxysilane	3388-04-3		0.007	mg	4821	159
				supplier	glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.007	mg	4821	159				
				supplier	glue	Palladium (Pd)	7440-05-3		0.002	mg	1377	45				
				supplier	wire	Copper (Cu)	7440-50-8		0.187	mg	1000000	4250				
				Encapsulation	M-011 Other inorganic materials	21.629	mg	supplier	mold compound	silica vitreous	60676-86-0		19.033	mg	879976	432568
								supplier	mold compound	Biphenyl epoxy resin	85954-11-6		1.081	mg	49979	24568
								supplier	mold compound	Phenolic resin	205830-20-2		0.844	mg	39022	19182
								supplier	mold compound	Epoxy resin	Proprietary		0.433	mg	20019	9841
supplier	mold compound	carbon black	1333-86-4						0.043	mg	1988	977				
supplier	mold compound	other	Proprietary						0.195	mg	9016	4432				