



## 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>	2018-04-16
<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
	8MX0*UP03BA5	A	CA2A	2018-04-16
Amount	UoM	Unit type	ST ECOPACK Grade	
20.8	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	 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	3x3x1	8	flat	
Comment	X0 VDFPN 3x3x1.0 8 PITCH 0.50; MDF valid for L5981TR			

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	8MX0*UP03BA5				5000003.0	1000046.0			
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	1.570	mg	supplier	die	Silicon (Si)	7440-21-3		1.488	mg	947771	71538			
				supplier	metallization	Aluminium (Al)	7429-90-5		0.015	mg	9554	721			
				supplier	metallization	Tungsten (W)	7440-33-7		0.012	mg	7643	577			
				supplier	Passivation	Silicon Nitride	12033-89-5		0.003	mg	1911	144			
				supplier	Passivation	Silicon Oxide	7631-86-9		0.026	mg	16561	1250			
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	637	48			
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1911	144			
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.006	mg	3822	288			
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.016	mg	10191	769			
				supplier	alloy	Copper (Cu)	7440-50-8		10.075	mg	995160	484375			
Leadframe	M-004 Copper and its alloys	10.124	mg	supplier	alloy	Iron (Fe)	7439-89-6		0.005	mg	494	240			
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.008	mg	790	385			
				supplier	metallization	Nickel (Ni)	7440-02-0		0.033	mg	3260	1587			
				supplier	metallization	Palladium (Pd)	7440-05-3		0.002	mg	198	96			
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	99	48			
				M-006 Nickel and its alloys	0.544	mg	supplier	glue	Silver (Ag)	7440-22-4		0.434	mg	797794	20865
							supplier	glue	methylene diacrylate	42594-17-2		0.089	mg	163603	4279
							supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.014	mg	25735	673
							supplier	glue	Epoxyhexyloxyethyltrimethoxysilane	3388-04-3		0.003	mg	5515	144
							supplier	glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.003	mg	5515	144
supplier	glue	Palladium (Pd)	7440-05-3					0.001	mg	1838	48				
Bonding wires	M-008 Precious metals	0.100	mg	supplier	wire	Gold (Au)	7440-57-5		0.099	mg	990000	4760			
				supplier	wire	Palladium (Pd)	7440-05-3		0.001	mg	10000	48			
Encapsulation	M-011 Other inorganic materials	8.463	mg	supplier	mold compound	silica vitreous	60676-86-0		7.218	mg	852889	347019			
				supplier	mold compound	epoxy resin	29690-82-2		0.339	mg	40057	16298			
				supplier	mold compound	Phenol resin	25068-38-6		0.296	mg	34976	14231			
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.339	mg	40057	16298			
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.169	mg	19969	8125			
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.085	mg	10044	4087			
				supplier	mold compound	carbon black	1333-86-4		0.017	mg	2009	817			