




## 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>	25-09-2018
<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>	MDG MD CHAMPION	<b>Representative Title</b>	MDG 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
<b>Legal Statement</b>	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L412CUB6P	S2MI*464XXXA	A	998Z	25-09-2018
	Amount	UoM	Unit type	ST ECOPACK Grade
	97.83	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; if coating is used or other bulk termination	Tin (Sn), immersion	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	5X5X0.55	48	No lead	
Comment	Package : A0B9 UFQFPN 7X7X0.55 48L 0.5 MM PITCH 8202210			

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-27th June 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	SZMI*464XXXA				6000000.0	999992.0
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 or dies	M-011 Other inorganic materials	2.830	mg	supplier	die	Silicon (Si)	7440-21-3		2.556	mg	903180	26127
				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	4594	133
				supplier	metallization	Copper (Cu)	7440-50-8		0.116	mg	40989	1186
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.038	mg	13428	388
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	353	10
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	353	10
				supplier	Passivation	Silicon Nitride	12033-89-5		0.030	mg	10601	307
				supplier	Passivation	Silicon Oxide	7631-86-9		0.075	mg	26502	767
Die Attach Epoxy_ABLEBOND 8290_H	M-011 Other inorganic materials	1.016	mg	Supplier	Metals	Silver	7440-22-4		0.800	mg	787329	8179
				Supplier	Organic Compound	Epoxy Resin 1	Proprietary		0.025	mg	24750	257
				Supplier	Organic Compound	Epoxy Resin 2	Proprietary		0.025	mg	24750	257
				Supplier	Organic Compounds	Gamma Butyrolactone	96-48-0		0.055	mg	54129	562
				Supplier	Organic Compound	Epoxy Resin 3	Proprietary		0.025	mg	24750	257
				Supplier	Organic Compound	Amine	Proprietary		0.025	mg	24750	257
				Supplier	Metallic compounds	Copper Oxide	1317-38-0		0.055	mg	54129	562
				Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8		0.006	mg	5413	56
EMC_G770_Sumitomo	M-011 Other inorganic materials	35.956	mg	Supplier	Organic Compound	Epoxy Resin A	Proprietary		0.713	mg	19837	7291
				Supplier	Organic Compound	Epoxy Resin B	Proprietary		0.713	mg	19837	7291
				Supplier	Organic Compound	Phenol Resin A	Proprietary		0.713	mg	19837	7291
				Supplier	Organic Compound	Phenol Resin B	Proprietary		0.713	mg	19837	7291
				Supplier	Glass	Silica (Amorphous) A	60676-86-0		26.336	mg	732452	269207
				Supplier	Glass	Silica (Amorphous) B	7631-86-9		5.852	mg	162767	59824
				Supplier	Metallic compounds	Metal Hydroxide	Proprietary		0.713	mg	19837	7291
				Supplier	Additives	Carbon Black	1333-86-4		0.201	mg	5595	2056
BondingWire_Ag_MKE	Bonding Wire	0.455	mg	Supplier	Metals	Silver	7440-22-4		0.437	mg	960000	4464
				Supplier	Metals	Others	Proprietary		0.018	mg	40000	186
Anode Ball_Tin_Asahi	Metals	3.693	mg	Supplier	Metals	Tin	7440-31-5		3.693	mg	1000000	37746
Leadframe_C7+Ag_HDS	Metals	53.878	mg	Supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16172
				Supplier	Glass	Silicon	7440-21-3		0.350	mg	6500	3580
				Supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	862
				Supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34696
				Supplier	Metals	Copper	7440-50-8		48.467	mg	899570	495426