



## 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*

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-09-02
<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>		

<b>Uncertainty Statement</b>	
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<b>Legal Statement</b>	
<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
STM32F051C8U7 STM32F051C8U7TR	F3MI*440XXXB	A	P1C7	2018-09-02
	Amount	UoM	Unit type	ST ECOPACK Grade
	97.48	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	7x7x0.55	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-12th January 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	F3MI*440XXB			5.999999.0	1000000.0	
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	4.370	mg	supplier	die	Silicon (Si)	7440-21-3		3.943	mg	902288	40451
				supplier	metallization	Aluminium (Al)	7429-90-5		0.029	mg	6636	298
				supplier	metallization	Copper (Cu)	7440-50-8		0.145	mg	33181	1488
				supplier	metallization	Cobalt (Co)	7440-48-4		0.027	mg	6178	277
				supplier	metallization	Titanium (Ti)	7440-32-6		0.008	mg	1831	82
				supplier	metallization	Tungsten (W)	7440-33-7		0.016	mg	3661	164
				supplier	Passivation	Silicon Nitride	12033-89-5		0.019	mg	4348	195
				supplier	Passivation	Silicon Oxide	7631-86-9		0.183	mg	41876	1877
				Supplier	Metals	Silver (Ag)	7440-22-4		0.371	mg	800000	3807
				Supplier	Plastics/polymers	methylene diacrylate	42594-17-2		0.062	mg	134000	638
Die Attach Material	M-011 Other inorganic materials	0.464	mg	Supplier	Polymers	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.012	mg	25000	119
				Supplier	Organic Compounds	Polybutadiene Anhydride	Proprietary		0.014	mg	30000	143
				Supplier	Polymers	Epoxy cyclohexylethyltrimethoxysilane	3388-04-3		0.002	mg	5000	24
				Supplier	Organic Compounds	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.002	mg	5000	24
				Supplier	Metals	Palladium (Pd)	7440-05-3		0.000	mg	1000	5
				Supplier	Glass	silica vitreous	60676-86-0		30.531	mg	880000	313208
				Supplier	Epoxy Resin	Biphenyl epoxy resin	85954-11-6		1.735	mg	50000	17796
				Supplier	Phenol Resin	Phenolic resin	205830-20-2		1.353	mg	39000	13881
				Supplier	Epoxy Resin	Epoxy resin	Proprietary		0.694	mg	20000	7118
				Supplier	Additive	carbon black	1333-86-4		0.069	mg	2000	712
Bonding wire	M-011 Other inorganic materials	0.378	mg	Supplier	Metals	other	Proprietary		0.312	mg	9000	3203
				Supplier	Metals	Silver	7440-22-4		0.363	mg	960000	3726
				Supplier	Metals	Others	Proprietary		0.015	mg	40000	155
Leadframe	M-011 Other inorganic materials	53.878	mg	Supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16231
				Supplier	Metals	Silicon	7440-21-3		0.350	mg	6500	3593
				Supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	865
				Supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34822
				Supplier	Metals	Copper	7440-50-8		48.467	mg	899570	497215
Leadframe coating	M-011 Other inorganic materials	3.693	mg	Supplier	Metals	Nickel (Ni)	7440-02-0		3.385	mg	916800	34731
				Supplier	Metals	Palladium (Pd)	7440-05-3		0.217	mg	58700	2224
				Supplier	Metals	Gold (Au)	7440-57-5		0.090	mg	24500	928