



## 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>	2018-12-09
<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
STM32L412RBT6	S05W*464XXXA	A	998Z	2018-12-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	374.80	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	
QFP	10X10X1.4	64	L Bend	
Comment	Package : 5W LQFP 64 10x10x1.4 1 0051434			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	S05W*464XXXA				6000000.0	1000000.9
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	7.077	mg	supplier	die	Silicon (Si)	7440-21-3		6.803	mg	961283	18151
				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	1837	35
				supplier	metallization	Copper (Cu)	7440-50-8		0.116	mg	16391	310
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.038	mg	5370	101
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	141	3
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	141	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.030	mg	4239	80
				supplier	Passivation	Silicon Oxide	7631-86-9		0.075	mg	10598	200
				Supplier	Metals	Silver	7440-22-4		0.867	mg	901000	2315
				Supplier	Organic Compound	Highly cross-linked polymer	Proprietary		0.095	mg	99000	254
EMC_G631SHQ_Sumitomo	M-011 Other inorganic materials	247.869	mg	Supplier	Organic Compound	Epoxy Resin A	Proprietary		5.205	mg	21000	13888
				Supplier	Organic Compound	Epoxy Resin B	Proprietary		5.205	mg	21000	13888
				Supplier	Organic Compound	Phenol Resin	Proprietary		13.881	mg	56000	37035
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		193.449	mg	780450	516144
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		28.584	mg	115320	76266
				Supplier	Additives	Carbon Black	1333-86-4		1.544	mg	6230	4120
BondingWire_Ag_MKE	Bonding Wire	0.667	mg	Supplier	Metals	Silver	7440-22-4		0.640	mg	960000	1708
				Supplier	Metals	Others	Proprietary		0.027	mg	40000	71
Anode Ball_Tin_Asahi	Metals	3.921	mg	Supplier	Metals	Tin	7440-31-5		3.921	mg	1000000	10463
Leadframe_C9+Ag_HDS	Metals	114.300	mg	Supplier	Metals	Iron	7439-89-6		2.499	mg	21865	6668
				Supplier	Non-metals	Phosphorus	7723-14-0		0.083	mg	730	223
				Supplier	Metals	Zinc	7440-66-6		0.129	mg	1125	343
				Supplier	Metals	Copper	7440-50-8		104.383	mg	913235	278505
				Supplier	Metals	Silver	7440-22-4		7.201	mg	63000	19213
				JIG-R	Metals	Lead	7439-92-1		0.005	mg	45	14