



Materials Declaration Form


IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-09-01
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	MDG MD CHAMPION	Representative Title	MDG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement	
<p>While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.</p>	
Legal Statement	
Supplier Acceptance *	true
	Legal Declaration *
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
STM32L471VGT3	9C1L*415XXX4	B	959	2019-09-01
	Amount	UoM	Unit type	ST ECOPACK Grade
	681.44	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		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Matte Tin(Sn)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	14x14x1.4	100	L Bend	
Comment	Package : 1L LQFP 100 14x14x1.4 1 0086901			

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	9C1L*415XXX4				6000000.0	0.0
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	15.299	mg	supplier	die	Silicon (Si)	7440-21-3		14.729	mg	962743	21615
				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	1765	40
				supplier	metallization	Copper (Cu)	7440-50-8		0.242	mg	15818	355
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	65	1
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.078	mg	5098	114
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	196	4
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	131	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.061	mg	3987	90
				supplier	Passivation	Silicon Oxide	7631-86-9		0.156	mg	10197	229
				supplier								
LEADFRAME	M-011 Other inorganic materials	156.345	mg	supplier	ALLOY	Copper (Cu)	7440-50-8		147.008	mg	940282	215731
				supplier	ALLOY	Iron (Fe)	7439-89-6		3.621	mg	23160	5314
				supplier	ALLOY	Iron Phosphide (Fe2P)	1310-43-6		0.045	mg	288	66
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.181	mg	1158	266
				supplier	SPOT	Silver (Ag)	7440-22-4		5.490	mg	35112	8056
DIE ATTACH	M-011 Other inorganic materials	2.904	mg	supplier	GLUE	Silver (Ag)	7440-22-4		2.483	mg	855000	3644
				supplier	GLUE	Dodecyl acrylate	2156-97-0		0.073	mg	25000	107
				supplier	GLUE	methylene diacrylate	42594-17-2		0.232	mg	80000	341
				supplier	GLUE	Diglycidylphenyl glycidyl ether	13561-08-5		0.058	mg	20000	85
				supplier	GLUE	Isobornyl Methacrylate	7534-94-3		0.029	mg	10000	43
BONDING WIRE	M-011 Other inorganic materials	1.534	mg	supplier	GLUE	dimethylbenzyl peroxide	80-43-3		0.029	mg	10000	43
				supplier	BONDING WIRE	Silver (Ag)	7440-22-4		1.480	mg	965000	2172
				supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.008	mg	5000	11
ENCAPSULATION	M-011 Other inorganic materials	499.901	mg	supplier	BONDING WIRE	Palladium (Pd)	7440-05-3		0.046	mg	30000	68
				supplier	MOLDING COMPOUND	Silica, vitreous	60676-86-0		432.521	mg	864366	-365285
				supplier	MOLDING COMPOUND	Epoxy Resin	Proprietary		37.158	mg	74798	54529
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		24.772	mg	49865	36353
				supplier	MOLDING COMPOUND	3-Mercaptopropyl trimethoxysilane	4420-74-0		2.477	mg	4987	3635
FINISHING	M-011 Other inorganic materials	5.457	mg	supplier	MOLDING COMPOUND	Quartz	14808-60-7		1.486	mg	2992	2181
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		1.486	mg	2992	2181
				supplier	COATING	Tin (Sn)	7440-31-5		5.457	mg	1000000	8008