



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 *	2019-08-04
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 *
	Standard
Legal Statement	<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
STM32F413CHU6	S0MI*463XXXA	A	998Z	2019-08-04
	Amount	UoM	Unit type	ST ECOPACK Grade
	97.90	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), matte	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-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	SOMI*463XXXA				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	6.430	mg	supplier	die	Silicon (Si)	7440-21-3		5.676	mg	882737	57980
				supplier	metallization	Aluminium (Al)	7429-90-5		0.053	mg	8243	541
				supplier	metallization	Copper (Cu)	7440-50-8		0.342	mg	53188	3494
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	156	10
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.048	mg	7465	490
				supplier	metallization	Tungsten (W)	7440-33-7		0.154	mg	23950	1573
				supplier	Passivation	Silicon Nitride	12033-89-5		0.040	mg	6221	409
				supplier	Passivation	Silicon Oxide	7631-86-9		0.116	mg	18040	1185
				Supplier	Metals	Silver	7440-22-4		0.654	mg	704535	6679
				Supplier	Plastics/polymers	Bisphenol-F, epoxy resin	9003-36-5		0.045	mg	48437	459
Die Attach_EPOXY 8290_Henkel	M-011 Other inorganic materials	0.928	mg	Supplier	Polymers	Fatty acids, polymers with epichlorohydrin	68475-94-5		0.045	mg	48437	459
				Supplier	Organic Compounds	Gamma Butyrolactone	96-48-0		0.045	mg	48437	459
				Supplier	Epoxy Resin	Epoxy Resin	Proprietary		0.045	mg	48437	459
				Supplier	Amines	Poly(Oxy(methyl-1, 2-ethanediyl))	9046-10-0		0.045	mg	48437	459
				Supplier	Metallic compounds	Copper Oxide	1317-38-0		0.045	mg	48437	459
				Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8		0.004	mg	4844	46
				Supplier	Epoxy Resin	Epoxy Resin A	Proprietary		0.704	mg	19837	7193
				Supplier	Epoxy Resin	Epoxy Resin B	Proprietary		0.704	mg	19837	7193
				Supplier	Phenol Resin	Phenol Resin A	Proprietary		0.704	mg	19837	7193
				Supplier	Phenol Resin	Phenol Resin B	Proprietary		0.704	mg	19837	7193
Mold Compound_EME-G770_Sumitor	M-011 Other inorganic materials	32.480	mg	Supplier	Glass	Silica (Amorphous) A	60676-86-0		22.983	mg	732452	-765225
				Supplier	Glass	Silica (Amorphous) B	7631-86-9		5.778	mg	162767	59017
				Supplier	Metallic compounds	Metal Hydroxide	Proprietary		0.704	mg	19837	7193
				Supplier	Additives	Carbon Black	1333-86-4		0.199	mg	5595	2029
				Supplier	Metals	Silver	7440-22-4		0.467	mg	960000	4773
				Supplier	Metals	Others	Proprietary		0.019	mg	40000	199
				Supplier	Metals	Tin	7440-31-5		3.693	mg	1000000	37721
				Supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16161
				Supplier	Glass	Silicon	7440-21-3		0.350	mg	6500	3577
				Supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	861
Bonding wire_WIRE AG SI TYPE_MKE	Bonding Wire	0.487	mg	Supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34673
				Supplier	Metals	Copper	7440-50-8		48.467	mg	899570	495088
				Supplier	Metals	Others	Proprietary		0.019	mg	40000	199
				Supplier	Metals	Tin	7440-31-5		3.693	mg	1000000	37721
Anode Ball_Pure Tin_Nuo Nengda	M-011 Other inorganic materials	3.693	mg	Supplier	Metals	Tin	7440-31-5		3.693	mg	1000000	37721
Lead frame_C7+AG_HDS	Copper & its alloys	53.878	mg	Supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16161
				Supplier	Glass	Silicon	7440-21-3		0.350	mg	6500	3577
				Supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	861
				Supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34673
Supplier	Metals	Copper	7440-50-8		48.467	mg	899570	495088				