



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 *	2017-04-10
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	
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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
STM32F412CGU6 STM32F412CGU6TR	B0MI*441XXXC	A	9988	2017-04-10
	Amount	UoM	Unit type	ST ECOPACK Grade
	110.66	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- 7th July 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 :						Mfr Item Name	BOMI*441XXC				5999999.0	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	5.345	mg	supplier	die	Silicon (Si)	7440-21-3		4.719	mg	882881	42643				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.044	mg	8232	398				
				supplier	metallization	Copper (Cu)	7440-50-8		0.284	mg	53134	2566				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	187	9				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.040	mg	7484	361				
				supplier	metallization	Tungsten (W)	7440-33-7		0.128	mg	23948	1157				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.033	mg	6174	298				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.096	mg	17961	867				
				supplier	Glue	Silver	7440-22-4		0.654	mg	704741	5910				
				supplier	Glue	Bisphenol-F, epoxy resin	9003-36-5		0.045	mg	48491	407				
Die Attach(ABLEBOND 8290)	M-011 Other inorganic materials	0.928	mg	supplier	Glue	Fatty acids, polymers with epichlorohydrin	68475-94-5		0.045	mg	48491	407				
				supplier	Glue	Gamma Butyrolactone	96-48-0		0.045	mg	48491	407				
				supplier	Glue	Epoxy Resin Proprietary	Properties		0.045	mg	48491	407				
				supplier	Glue	Poly(Oxy(methyl-1, 2-ethanediyl))	9046-10-0		0.045	mg	48491	407				
				supplier	Glue	Copper Oxide	1317-38-0		0.045	mg	48491	407				
				supplier	Glue	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8		0.004	mg	4310	36				
				Encapsulation(EME-G770_Sumitomo)	M-011 Other inorganic materials	33.720	mg	supplier	Molding compound	Epoxy Resin A	Proprietary		1.078	mg	31969	9741
								supplier	Molding compound	Epoxy Resin B	Proprietary		1.078	mg	31969	9741
supplier	Molding compound	Phenol Resin A	Proprietary						1.078	mg	31969	9741				
supplier	Molding compound	Phenol Resin B	Proprietary						1.078	mg	31969	9741				
supplier	Molding compound	Metal Hydroxide	Proprietary						0.539	mg	15985	4871				
supplier	Molding compound	Carbon Black	1333-86-4						0.108	mg	3203	976				
supplier	Molding compound	Silica Fused	60676-86-0						28.761	mg	852936	259894				
Bonding wire(Au_UR2_MKE)	M-011 Other inorganic materials	0.857	mg	supplier	Wire	Gold	7440-57-5		0.857	mg	1000000	7746				
Finishing(Pure Tin_Nuonengda)	M-011 Other inorganic materials	3.755	mg	supplier	Connection coating	Tin	7440-31-5		3.755	mg	1000000	33931				
Leadframe(Mitsui C7025+AG)	M-011 Other inorganic materials	66.058	mg	supplier	Alloy	Copper	7440-50-8		62.641	mg	948273	566046				
				supplier	Alloy	Nickel	7440-02-0		1.960	mg	29671	17711				
				supplier	Alloy	Silicon	7440-21-3		0.424	mg	6419	3831				
				supplier	Alloy	Magnesium	7439-95-4		0.099	mg	1499	895				
				supplier	Alloy	Silver	7440-22-4		0.934	mg	14139	8440				