




Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-03-05
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section		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
STM32F401CCF6TR	TOIA*423XXXZ	A	996S	2018-03-05
	Amount	UoM	Unit type	ST ECOPACK Grade
	4.96	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Tin/Silver/Copper/Nickel(SAC405)	NAC	NAC		

Package Designator	Size	Nbr of instances	Shape	
WLCSF	Not Applicable	64	No lead	
Comment	Package : B04H THIN WLCSF 49L DIE 423 PITCH 0.4 DM00376892			

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 :						Mfr Item Name		TO1A*423XXZ		9000000.0		999986.1	
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	3.581	mg	supplier	die	Silicon (Si)	7440-21-3		3.164	mg	883552	637415	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.029	mg	8098	5842	
				supplier	metallization	Copper (Cu)	7440-50-8		0.190	mg	53058	38277	
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	279	201	
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.026	mg	7261	5238	
				supplier	metallization	Tungsten (W)	7440-33-7		0.085	mg	23736	17124	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.022	mg	6144	4432	
Plating Seed layer 1	M-011 Other inorganic materials	0.003	mg	supplier	Passivation	Silicon Oxide	7631-86-9		0.064	mg	17872	12893	
				supplier	Alloy	Ti	7440-32-6		0.001	mg	200963	123	
				supplier	Alloy	Cu	7440-50-8		0.002	mg	799037	489	
Re-passivatipon layer	M-011 Other inorganic materials	0.074	mg	supplier	Polymer	4-Butyrolactone	96-48-0		0.067	mg	900000	13441	
				supplier	Polymer	1-Methoxy-2-propyl acetate	108-65-6		0.007	mg	100000	1493	
Redistribution Layer	M-011 Other inorganic materials	0.162	mg	supplier	Alloy	Cu	7440-50-8		0.162	mg	1000000	32549	
Plating Seed layer 2	M-011 Other inorganic materials	0.010	mg	supplier	Alloy	Ti	7440-32-6		0.002	mg	200963	409	
				supplier	Alloy	Cu	7440-50-8		0.008	mg	799037	1627	
Re-passivatipon layer	M-011 Other inorganic materials	0.074	mg	supplier	Polymer	4-Butyrolactone	96-48-0		0.067	mg	900000	13441	
				supplier	Polymer	1-Methoxy-2-propyl acetate	108-65-6		0.007	mg	100000	1493	
UBM	M-011 Other inorganic materials	0.104	mg	supplier	Alloy	Cu	7440-50-8		0.104	mg	1000000	21032	
Solder ball	Solder	0.644	mg	supplier	Solder	Sn	7440-31-5		0.615	mg	955000	123897	
				supplier	Solder	Ag	7440-22-4		0.026	mg	40000	5189	
				supplier	Solder	Cu	7440-50-8		0.003	mg	5000	649	
Back Side Coating	M-011 Other inorganic materials	0.311	mg	supplier	Polymer	Polybutylene terephthalate (PBT)	25038-59-9		0.202	mg	650000	40775	
				supplier	Polymer	Silica	Proprietary		0.061	mg	195000	12232	
				supplier	Polymer	Proprietary Material-Other Epoxy resins	Proprietary		0.023	mg	75000	4705	
				supplier	Polymer	Proprietary Material-Other Acrylic resins	Proprietary		0.023	mg	75000	4705	
				supplier	Polymer	Carbon black	1333-86-4		0.002	mg	5000	314	