



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 *	2018-08-22
Company Unique ID	NL 008751171801		
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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
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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
	MFBB*UAT2AB5	A	Z8GA	2018-08-22
Amount	UoM	Unit type	ST ECOPACK Grade	
1.94	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	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	1x1x0.38	4	flat	
Comment	A0TH VFDFPN 1.0X1.0X0.38 4L PITCH 0,6; MDF valid for LD39020ADTPU28R			

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	MFBB*UATZAB5				4999999.0	999226.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	0.067	mg	supplier	die	Silicon (Si)	7440-21-3		0.061	mg	910448	31443
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	29851	1031
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	14925	515
				supplier	Passivation	Silicon Oxide	7631-86-9		0.003	mg	44776	1546
Leadframe	M-004 Copper and its alloys	1.808	mg	supplier	Alloy	Copper(CU)	7440-50-8		1.780	mg	984513	917526
				supplier	Alloy	Chromium(Cr)	7440-47-3		0.006	mg	3319	3093
				supplier	Alloy	Zinc(Zn)	7440-66-6		0.004	mg	2212	2062
				supplier	Alloy	Tin(Sn)	7440-31-5		0.006	mg	3319	3093
				supplier	metallization	Nickel (Ni)	7440-02-0		0.004	mg	2212	2062
				supplier	metallization	Palladium (Pd)	7440-05-3		0.004	mg	2212	2062
	M-008 Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.004	mg	2212	2062
Die Attach	M-015 Other organic materials	0.041	mg	supplier	glue	Silver(Ag)	7440-22-4		0.033	mg	804878	17010
				supplier	glue	Epoxy	29690-82-2		0.003	mg	73171	1546
				supplier	glue	Anhydride	proprietary		0.003	mg	73171	1546
				supplier	glue	Epoxy resin	29690-82-2		0.001	mg	24390	515
				supplier	glue	Ethylene glycol monobutyl ether acetate	112-07-2		0.001	mg	24390	515
Bonding wires	M-008 Precious metals	0.020	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.020	mg	1000000	10309
Encapsulation	M-015 Other organic materials	0.003	mg	supplier	Molding compound	Epoxy Resin	Proprietary		0.000	mg	40000	52
				supplier	Molding compound	Biphenyl epoxy resin	85954-11-6		0.000	mg	40000	52
				supplier	Molding compound	Phenol Resin	9003-35-4		0.000	mg	40000	52
				supplier	Molding compound	Magnesium hydroxide	1309-42-8		0.000	mg	80000	103
				supplier	Molding compound	Amorphous silica	60676-86-0		0.002	mg	800000	1031