



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 *	2017-12-07
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMG 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

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.


Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
------------------------------	------	----------------------------	----------

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 omprehensive 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
	8M72*UBDTABA	A	CA2A	2017-12-07
Amount	UoM	Unit type	ST ECOPACK Grade	
29.80	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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	3x3x1	16	No lead	
Comment	PACKAGE: 72 VFQFPN 16 3x3x1.0 PITCH 0.50; MDF valid for STSPIN233			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	8M72*UBDTABA									
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die	Other inorganic materials	1.429	mg	supplier	die	Silicon (Si)	7440-21-3		1.259	mg	881036	42248				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	2799	134				
				supplier	metallization	Copper (Cu)	7440-50-8		0.104	mg	72778	3490				
				supplier	passivation	Nickel (Ni)	7440-02-0		0.013	mg	9097	436				
				supplier	metallization	Platinum (Pt)	7440-06-4		0.007	mg	4899	235				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	700	34				
				supplier	metallization	Tungsten (W)	7440-33-7		0.006	mg	4199	201				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.003	mg	2099	101				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.023	mg	16095	772				
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	700	34				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	2099	101				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.005	mg	3499	168				
				Leadframe	Copper & its alloys	12.187	mg	supplier	alloy	Copper (Cu)	7440-50-8		11.646	mg	955608	390805
								supplier	alloy	Nickel (Ni)	7440-02-0		0.363	mg	29786	12181
								supplier	alloy	Magnesium (Mg)	7439-95-4		0.018	mg	1477	604
supplier	alloy	Silicon (Si)	7440-21-3						0.079	mg	6482	2651				
supplier	metallization	Nickel (Ni)	7440-02-0						0.074	mg	6072	2483				
supplier	metallization	Palladium (Pd)	7440-05-3						0.005	mg	410	168				
supplier	metallization	Gold (Au)	7440-57-5						0.002	mg	164	67				
Die attach	Other Organic Materials	0.468	mg					supplier	glue	Silver (Ag)	7440-22-4		0.374	mg	799145	12550
								supplier	glue	methylene diacrylate	42594-17-2		0.063	mg	134615	2114
								supplier	glue	Dicyclopentenyl oxethyl methacrylate	68586-19-6		0.012	mg	25641	403
				supplier	glue	Polybutadiene Anhydride	Proprietary		0.014	mg	29915	470				
				supplier	glue	Epoxy cyclohexylethyltrimethoxysilane	3388-04-3		0.002	mg	4274	67				
				supplier	glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.002	mg	4274	67				
				supplier	glue	Palladium (Pd)	7440-05-3		0.001	mg	2137	34				
				Bonding wires	Other inorganic materials	0.204	mg	supplier	wire	Copper (Cu)	7440-50-8		0.200	mg	980392	6711
								supplier	wire	Palladium (Pd)	7440-05-3		0.004	mg	19608	134
								Encapsulation	Other Organic Materials	15.512	mg	supplier	mold compound	silica vitreous	60676-86-0	
supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.776	mg	50026					26040				
supplier	mold compound	Phenolic resin	205830-20-2		0.605	mg	39002					20302				
supplier	mold compound	Epoxy resin	29690-82-2		0.310	mg	19985					10403				
supplier	mold compound	carbon black	1333-86-4		0.031	mg	1998					1040				
supplier	mold compound	other	Proprietary		0.140	mg	9025	4698								