




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 *	2017-11-22
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Laurent TOSI	Representative Title	MMS MD CHAMPION
Representative Phone *	33 442 685 795	Representative Email *	laurent.tosi@st.com
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 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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM8AL3146UCX	P242*79HX21Z	A	9996	2017-11-22
	Amount	UoM	Unit type	ST ECOPACK Grade
	69.0	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 : add in comments	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	5x5x1.0	32	L bend	
Comment	Package: 42 VFQFPN 5X5x1.0 32L PITCH 0.5 7376875			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	P242*79HX21Z					
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	3.048	mg	supplier	die	Silicon (Si)	7440-21-3		2.909	mg	954396	42159
				supplier	metallization	Aluminium (Al)	7429-90-5		0.012	mg	3937	174
				supplier	metallization	Copper (Cu)	7440-50-8		0.040	mg	13123	580
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.005	mg	1640	72
				supplier	metallization	Titanium (Ti)	7440-32-6		0.006	mg	1969	87
				supplier	Passivation	Silicon Nitride	12033-89-5		0.011	mg	3609	159
LEADFRAME (C194Ag)	M-011 Other inorganic materials	39.919	mg	supplier	ALLOY	Copper (Cu)	7440-50-8		38.921	mg	974999	564072
				supplier	ALLOY	Iron (Fe)	7439-89-6		0.938	mg	23498	13594
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.048	mg	1202	696
				supplier	ALLOY	Phosphorus (P)	7723-14-0		0.012	mg	301	174
LEADFRAME (C194Ag) Coating	M-011 Other inorganic materials	0.896	mg	supplier	COATING	Silver (Ag)	7440-22-4		0.896	mg	1000000	12986
DIE ATTACH (AMK06)	M-011 Other inorganic materials	0.563	mg	supplier	GLUE	Proprietary Acrylates	Proprietary		0.056	mg	100000	816
				supplier	GLUE	Silver (Ag)	7440-22-4		0.450	mg	800000	6528
				supplier	GLUE	2-Propenoic,2-methyl-,2[(2,3,3a,4,7,7a(or 3a,4	68586-19-6		0.051	mg	90000	734
				#N/A	GLUE	2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.006	mg	10000	82
BONDING WIRE	M-011 Other inorganic materials	0.538	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.538	mg	1000000	7799
ENCAPSULATION (EME G700Y)	M-011 Other inorganic materials	22.521	mg	supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		2.147	mg	95315	31110
				supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		19.182	mg	851730	277999
				supplier	MOLDING COMPOUND	Phenol Resin	205830-20-2		1.073	mg	47658	15555
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		0.119	mg	5297	1729
EXTERNAL PLATING	M-011 Other inorganic materials	1.515	mg	supplier	COATING	Tin (Sn)	7440-31-5		1.515	mg	1000000	21954