



## Materials Declaration Form


<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D

\*: Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	28-09-2018
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	MDG MD CHAMPION	<b>Representative Title</b>	MDG MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

Uncertainty Statement	
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Legal Statement	
<b>Supplier Acceptance *</b>	true
	<b>Legal Declaration *</b>
	Standard
<b>Legal Statement</b>	<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
STM32L4S9ZIJ6	P148*470XXXY	A	9996	28-09-2018
	Amount	UoM	Unit type	ST ECOPACK Grade
	109.90	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	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	10X10X0.8	144	No lead	
Comment	Package : A0ZY UFBGA 10X10 144L P 0.8 MM 8526251			

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 :						Mfr Item Name	P148*470XXYY				6000000.0	1000000.0				
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	5.775	mg	supplier	die	Silicon (Si)	7440-21-3		4.837	mg	837576	44013				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.045	mg	7792	409				
				supplier	metallization	Copper (Cu)	7440-50-8		0.397	mg	68745	3612				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	173	9				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.129	mg	22338	1174				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	866	45				
				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	519	27				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.101	mg	17489	919				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.257	mg	44502	2338				
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	33.744	mg	supplier	CORE	Glass Cloth	65997-17-3		5.736	mg	170000	52197
supplier	CORE	Epoxy resin	61788-97-4						1.350	mg	40000	12282				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						1.350	mg	40000	12282				
supplier	CORE	Heat resistant resin	25722-66-1						1.350	mg	40000	12282				
supplier	CORE	Silica filler	7631-86-9						3.712	mg	110000	33775				
supplier	CORE	Metal Hydroxide	Proprietary						0.675	mg	20000	6141				
supplier	COPPER FOIL	Copper (Cu)	7440-50-8						14.172	mg	420000	128958				
supplier	SOLDERMASK (AUS320)	Solvent naphtha(petroleum),heavy aromatic	64742-94-5						1.856	mg	55000	16887				
supplier	SOLDERMASK (AUS320)	Napthalene	91-20-3						0.196	mg	5800	1781				
supplier	SOLDERMASK (AUS320)	Phosphin oxide derivative	Proprietary						0.067	mg	2000	614				
supplier	SOLDERMASK (AUS320)	Talc containing no asbestiform fibers	14807-96-6						0.506	mg	15000	4606				
supplier	SOLDERMASK (AUS320)	Barium sulfate	7727-43-7						0.844	mg	25000	7676				
supplier	SOLDERMASK (AUS320)	Dipropylene glycol monomethyl ether	34590-94-8						0.506	mg	15000	4606				
supplier	CU PLATING	Copper (Cu)	7440-50-8						1.215	mg	36000	11054				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						0.169	mg	5000	1535				
supplier	AU PLATING	Gold (Au)	7440-57-5						0.040	mg	1200	368				
DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.687	mg					supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-termi	68610-41-3		0.481	mg	700000	4375
								supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4		0.069	mg	100000	625
								supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4		0.063	mg	92000	575
								supplier	GLUE	Dapsone	80-08-0		0.067	mg	97000	606
				supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6		0.007	mg	10000	63				
				supplier	GLUE	4,4, isopropylidenediphenol	80-05-7		0.001	mg	1000	6				
BONDING WIRE (Au wire)	M-011 Other inorganic materials	2.038	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		2.038	mg	1000000	18547				
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	8.733	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		8.428	mg	965000	76684				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.306	mg	35000	2781				
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	58.922	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		52.943	mg	900000	481744				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		2.691	mg	45000	24481				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		2.392	mg	40000	21761				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.598	mg	10000	5440				
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.299	mg	5000	2720				