



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-03-03
Contact Name *	Refer to Supplier comment section	Contact Title	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 Material Declaration 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 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
	22CC*AU10BCA	B	MA1A	2020-03-03
	Amount	UoM	Unit type	ST ECOPACK Grade
	37.0	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Gold (Ni/Au), electrolytic	Copper Alloy	0	



Package Designator	Size	Nbr of instances	Shape	
LGA	4 x 4	16	flat	
Comment	A0CZ LLGA 4x4x1.1 16L Pitch 0.65; MDF is valid for A3G4250D-A3G4250DTR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7c-1	7c-1-Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirement without any exemptions	FALSE
2 - Product(s) meets EU ELV requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
10a	Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d)

QueryList : California Prop65 list, dated 3rd January 2020			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.190	substrate	5135
Lead	0.328	die	8865
Lead-Borate Glass	0.544	die	14703

QueryList : REACH-16th January 2020				
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
:				
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Homogeneous Material above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Homogeneous Material (mg)	Application - Homogeneous Material	ppm in Homogeneous Material
:				

Material Composition Declaration						Mfr Item Name	22CC'AU10BCA		37.0015		5900303.0	1900027.0				
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Dies	M-011 Other inorganic materials	13.962	mg	supplier	die	Silicon(Si)	7440-21-3		12.776	mg	915055	345297				
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.032	mg	2292	865				
				supplier	metallisation	Copper(Cu)	7440-50-8		0.056	mg	4011	1514				
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.011	mg	788	297				
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.006	mg	430	162				
				supplier	metallisation	Tungsten(W)	7440-33-7		0.001	mg	72	27				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.022	mg	1576	595				
				supplier	passivation	Silicon Oxide	7631-86-9		0.514	mg	36814	13892				
					JIG-R & California 65			supplier	glass	Lead-Borate Glass	65997-18-4	7c-I-Electrical and electr	0.544	mg	38963	14703
								supplier	laminare	Fiber glass	65997-17-3		1.285	mg	186556	34730
Substrate	M-015 Other organic materials	6.888	mg	supplier	laminare	Bismaleimide polymer	105391-33-1		0.431	mg	62573	11649				
				supplier	laminare	Triazine (T)	25722-66-1		0.431	mg	62573	11649				
				supplier	laminare	Thermosetting resin	54208-63-8		0.721	mg	104675	19486				
				supplier	laminare	Aluminium hydroxide	21645-51-2		0.029	mg	4210	784				
				supplier	laminare	Calcium sulfate	7778-18-9		0.015	mg	2178	405				
				supplier	laminare	Zinc hydroxide	20427-58-1		0.009	mg	1307	243				
				supplier	laminare	Barium sulfate	7727-43-7		0.417	mg	69540	11270				
				supplier	laminare	Bisphenol F type epoxy resin	9003-36-5		0.403	mg	58508	10892				
				supplier	laminare	polymerized Biphenyl resin	85954-11-6		0.164	mg	23810	4432				
				supplier	laminare	Talc containing no asbestos form fibers	14807-96-6		0.101	mg	14663	2730				
				supplier	laminare	Methoxymethylethoxy propanol	34590-94-8		0.099	mg	14373	2676				
				supplier	laminare	Amorphous silica	7631-86-9		0.076	mg	11034	2054				
					M-004 Copper and its alloys			supplier	metallisation	Copper(Cu)	7440-50-8		2.483	mg	360482	67108
					M-006 Nickel and its alloys			supplier	metallisation	Nickel(Ni)	7440-02-0		0.190	mg	27584	5135
								supplier	metallisation	Gold(Au)	7440-57-5		0.034	mg	4936	919
				Die attach	M-015 Other organic materials	0.243	mg	supplier	tape	Epoxy resin	25068-38-6		0.153	mg	629630	4135
								supplier	tape	Polypropylene	9003-07-0		0.005	mg	20576	135
								supplier	tape	epoxy resin	29690-82-2		0.024	mg	98765	649
								supplier	tape	Propenoate polymer	538311-13-6		0.049	mg	201646	1324
								supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.012	mg	49383	324
Bonding wire	M-008 Precious metals	0.118	mg	supplier	wire	Gold(Au)	7440-57-5		0.117	mg	991525	3162				
				supplier	wire	Palladium(Pd)	7440-05-3		0.001	mg	8475	27				
encapsulation	M-015 Other organic materials	15.790	mg	supplier	mold compound	Silica vitreous	60676-86-0		13.665	mg	865421	369324				
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.632	mg	40025	17081				
				supplier	mold compound	Phenol resin	26834-02-6		0.632	mg	40025	17081				
				supplier	mold compound	Epoxyde bisphenol A resin	25068-38-6		0.474	mg	30019	12811				
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.316	mg	20013	8541				
				supplier	mold compound	Carbon black	1333-86-4		0.071	mg	4497	1919				