



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 *	2020-02-25
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

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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
	21AA*MV3TAHA	B	MA1A	2020-02-25
Amount	UoM	Unit type	ST ECOPACK Grade	
6.4	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	2 x 2	10	flat	
Comment	A0XA HLGA 2.0x2.0x0.8 MAX 10Lead; MDF is valid for KNG22HBTR-LPS22HB-LPS22HBTR-LPS22HDTR			

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-I	7c-I-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	0.046	substrate	7216
Lead	0.056	die	8706
Lead-Borate Glass	0.092	die	14431
Bisphenol A	0.001	substrate	157

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	21AA/MV3TAHA		6.3715		4999998.0	1000157.0	
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	2.485	mg	supplier	die	Silicon(Si)	7440-21-3		2.283	mg	918712	358118	
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.010	mg	4024	1569	
				supplier	metallisation	Copper(Cu)	7440-50-8		0.011	mg	4427	1725	
				supplier	metallisation	Gold(Au)	7440-57-5		0.037	mg	14889	5804	
				supplier	metallisation	Palladium(Pd)	7440-05-3		0.001	mg	402	157	
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.002	mg	805	314	
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.004	mg	1610	627	
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	1207	471	
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-6		0.012	mg	4829	1882	
				supplier	passivation	Silicon Oxide	7631-86-9		0.030	mg	12072	4706	
					JIG-R & California 65	glass	Lead-Borate Glass	65997-18-4	7c-l-Electrical and electr	0.092	mg	37022	14431
					supplier	laminata	Fiber glass	65997-17-3		0.209	mg	130543	32784
					supplier	laminata	Bisphenol F type epoxy resin	9003-36-5		0.208	mg	129919	32627
					supplier	laminata	Bismaleimide (B)	105391-33-1		0.071	mg	44347	11137
					supplier	laminata	Triazine (T)	25722-66-1		0.070	mg	43723	10980
	supplier	laminata	Aluminium hydroxide	21645-51-2		0.005	mg	3123	784				
	supplier	laminata	Zinc hydroxide	20427-58-1		0.001	mg	625	157				
	supplier	laminata	Calcium sulfate	7778-18-9		0.002	mg	1249	314				
	SVHC	laminata	BPA	80-05-7		0.001	mg	625	157				
	supplier	laminata	Barium sulfate	7727-43-7		0.094	mg	58713	14745				
	supplier	laminata	polymerized Biphenyl resin	85954-11-6		0.037	mg	23111	5804				
	supplier	laminata	Talc containing no asbestiform fibers	14807-96-6		0.023	mg	14366	3608				
	supplier	laminata	Methoxymethylethoxy propanol	34590-94-8		0.022	mg	13741	3451				
	supplier	laminata	Amorphous silica	7631-86-9		0.017	mg	10618	2667				
	M-004 Copper and its alloys	supplier	metallisation	Copper(Cu)	7440-50-8	0.787	mg	491568	123451				
	M-006 Nickel and its alloys	supplier	metallisation	Nickel(Ni)	7440-02-0	0.046	mg	28732	7216				
	supplier	metallisation	Gold(Au)	7440-57-5	0.008	mg	4997	1255					
Die attach	M-015 Other organic materials	0.059	mg	supplier	tape	Epoxy resin	25068-38-6		0.037	mg	627119	5804	
				supplier	tape	Polypropylene	9003-07-0		0.001	mg	16949	157	
				supplier	tape	epoxy resin	29690-82-2		0.006	mg	101695	941	
				supplier	tape	Propenoate polymer	538311-13-6		0.012	mg	203390	1882	
				supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.003	mg	50847	471	
Bonding wire	M-008 Precious metals	0.033	mg	supplier	wire	Gold(Au)	7440-57-5		0.033	mg	1000000	5176	
encapsulation	M-015 Other organic materials	2.198	mg	supplier	mold compound	Silica vitreous	60676-86-0		1.902	mg	865332	298353	
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.088	mg	40036	13804	
				supplier	mold compound	Phenol resin	26834-02-6		0.088	mg	40036	13804	
				supplier	mold compound	Epoxyde bisphenol A resin	25068-38-6		0.066	mg	30027	10353	
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.044	mg	20018	6902	
supplier	mold compound	Carbon black	1333-86-4		0.010	mg	4550	1569					