



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 *	2020-04-10
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 *	Antonella Lanzafame	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
L3G20DH	A53N*MV4QAAA	B	MA1A	2020-04-10
	Amount	UoM	Unit type	ST ECOPACK Grade
	19.0	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/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0



Package Designator	Size	Nbr of instances	Shape
lga	313	16	flat
Comment	LLGA 3X3X1.0 16L - FOR SENSOR		

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. piezoelectric devices, or in a glass or ceramic matrix compound

QueryList : ELV directive : 2000/53/EC amended 2020/363_ March 2020	
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
	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	0.081	alloy	4263
Lead	0.204	metallization	10758
Lead-Borate Glass	0.339	passivation	17842

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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Morpholine derivative	1000ppm	0.042	Substrate	2211
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Homogeneous Material (mg)	Application - Homogeneous Material	ppm in Homogeneous Material
Morpholine derivative	#N/A	0.042	Substrate	9887

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query				Response
The Product does contain at least one of the substances listed in Chemical Control Act				NO
Substance present in device Homogeneous Material				
Substance	Homogeneous Material impacted	Concentration in the material(%)	Application Purpose	

Material Composition Declaration					Mfr Item Name	A53N*MV4QAAA		10.0000	1000001.0	1000002.0						
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	8.668	mg	supplier	die	Silicon(Si)	7440-21-3		7.910	mg	912552	416316				
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.031	mg	3576	1632				
				supplier	metallisation	Copper(Cu)	7440-50-8		0.025	mg	2884	1316				
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.005	mg	577	263				
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.008	mg	923	421				
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	346	158				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.016	mg	1846	842				
				supplier	passivation	Silicon Oxide	7631-86-9		0.331	mg	38198	17421				
				JGC-R & California 65	glass	Lead-Borate Glass	65997-18-4	7c-Electrical and elect	0.339	mg	39109	17942				
				Substrate	M-015 Other organic materials	4.248	mg	supplier	laminata	Fiber glass	65997-17-3		0.750	mg	176554	39474
								supplier	laminata	Bismaleimide polymer	105391-33-1		0.252	mg	59322	13263
								supplier	laminata	Triazine (T)	25722-66-1		0.252	mg	59322	13263
supplier	laminata	Thermosetting resin	54208-63-8						0.421	mg	99105	22158				
supplier	laminata	Aluminium hydroxide	21645-51-2						0.017	mg	4002	895				
supplier	laminata	Calcium sulfate	7778-18-9						0.009	mg	2119	474				
supplier	laminata	Zinc hydroxide	20427-58-1						0.005	mg	1177	263				
supplier	laminata	Barium sulfate	7727-43-7						0.268	mg	63089	14105				
supplier	laminata	Bisphenol F type epoxy resin	9003-36-5						0.244	mg	57439	12842				
supplier	laminata	polymerized Biphenyl resin	85954-11-6						0.101	mg	23776	5316				
supplier	laminata	Talc containing no asbestiform fibers	14807-96-6						0.067	mg	15772	3526				
supplier	laminata	Methoxymethylethoxy propanol	34590-94-8						0.059	mg	13889	3105				
supplier	laminata	Amorphous silica	7631-86-9						0.050	mg	11770	2632				
SVHC	laminata	Morpholine derivative	119313-12-1						0.042	mg	9887	2211				
supplier	laminata	Naphta	64742-94-5						0.008	mg	1853	421				
supplier	metallisation	Copper(Cu)	7440-50-8						1.807	mg	378296	84579				
M-004 Copper and its alloys	supplier	metallisation	Nickel(Ni)					7440-02-0	0.081	mg	19068	4263				
M-006 Nickel and its alloys	supplier	metallisation	Gold(Au)					7440-57-5	0.015	mg	3531	789				
Die attach	M-015 Other organic materials	0.216	mg	supplier	tape	Epoxy resin	25068-38-6		0.136	mg	629630	7158				
				supplier	tape	Polypropylene	9003-07-0		0.004	mg	18519	211				
				supplier	tape	epoxy resin	29690-82-2		0.022	mg	101852	1158				
				supplier	tape	Propenoate polymer	538311-13-6		0.043	mg	199074	2263				
				supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.011	mg	50926	579				
				Die attach 2	supplier	tape	Amorphous silica	7631-86-9	0.075	mg	416667	3947				
				supplier	tape	Polyethylen terephthalate	25038-59-9		0.045	mg	250000	2368				
				supplier	tape	Acrylic resin	9003-01-4		0.030	mg	166667	1579				
				supplier	tape	Epoxyde bisphenol A resin	25068-38-6		0.030	mg	166667	1579				
				supplier	wire	Gold(Au)	7440-57-5		0.315	mg	990566	16579				
Bonding wire	M-008 Precious metals	0.318	mg	supplier	wire	Palladium(Pd)	7440-05-3		0.003	mg	9434	158				
				encapsulation	M-015 Other organic materials	5.370	mg	supplier	mold compound	Silica vitreous	60676-86-0	4.648	mg	865549	244632	
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.215	mg	40037	11316				
				supplier	mold compound	Phenol resin	26834-02-6		0.215	mg	40037	11316				
				supplier	mold compound	Epoxyde bisphenol A resin	25068-38-6		0.161	mg	29981	8474				
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.107	mg	19926	5632				
				supplier	mold compound	Carbon black	1333-86-4		0.024	mg	4469	1263				