



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 *	2020-02-20
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
	C53N*MT78ADA	B	MA1A	2020-02-20
	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/Gold (Ni/Au), electrolytic	Copper Alloy	0	



Package Designator	Size	Nbr of instances	Shape	
LGA	3 x 3	16	flat	
Comment	3N LLGA 3X3X1.0 16L - FOR SENSOR; MDF is valid for H3LIS100DLTR and H3LIS100DL			

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	0.162	substrate	8526
Lead	0.160	die	8442
Lead-Borate Glass	0.266	die	14000

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	1000	0.031	Substrate	1632
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	1000	0.031	Substrate	11716

Material Composition Declaration						Mfr Item Name	C53N*MT78ADA		19.0003		5900301.0	1900109.0				
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	5.140	mg	supplier	die	Silicon(Si)	7440-21-3		4.743	mg	922763	249632				
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.023	mg	4475	1211				
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.003	mg	584	158				
				supplier	metallisation	Tungsten(W)	7440-33-7		0.002	mg	389	105				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.009	mg	1751	474				
				supplier	passivation	Silicon Oxide	7631-86-9		0.066	mg	12840	3474				
					JIG-R & California 65	Lead-Borate Glass	65997-18-4	7c-l-Electrical and electr	0.266	mg	51751	14000				
				supplier	polymer coating	polyimide	proprietary		0.028	mg	5447	1474				
				supplier	laminare	Fiber glass	65997-17-3		0.752	mg	284203	39579				
				supplier	laminare	Bismaleimide polymer	105391-33-1		0.252	mg	95238	13263				
				supplier	laminare	Triazine (T)	25722-66-1		0.252	mg	95238	13263				
				Substrate	M-015 Other organic materials	2.646	mg	supplier	laminare	Thermosetting resin	54208-63-8		0.422	mg	159486	22211
supplier	laminare	Aluminium hydroxide	21645-51-2						0.017	mg	6425	895				
supplier	laminare	Calcium sulfate	7778-18-9						0.009	mg	3401	474				
supplier	laminare	Zinc hydroxide	20427-58-1						0.005	mg	1890	263				
supplier	laminare	Barium sulfate	7727-43-7						0.197	mg	74452	10368				
supplier	laminare	Bisphenol F type epoxy resin	9003-36-5						0.179	mg	67649	9421				
supplier	laminare	polymerized Biphenyl resin	85954-11-6						0.074	mg	27967	3895				
supplier	laminare	Talc containing no asbestiform fibers	14807-96-6						0.049	mg	18519	2579				
supplier	laminare	Methoxymethylethoxy propanol	34590-94-8						0.043	mg	16251	2263				
supplier	laminare	Amorphous silica	7631-86-9						0.037	mg	13983	1947				
	SVHC	Morpholine derivative	119313-12-1						0.031	mg	11716	1632				
supplier	laminare	Naphta	64742-94-5						0.006	mg	2268	316				
	M-004 Copper and its alloys	supplier	metallisation					Copper(Cu)	7440-50-8		0.130	mg	49131	6842		
	M-006 Nickel and its alloys	supplier	metallisation					Nickel(Ni)	7440-02-0		0.162	mg	61224	8526		
supplier	metallisation	Gold(Au)	7440-57-5						0.029	mg	10960	1526				
Die attach	M-015 Other organic materials	0.121	mg					supplier	tape	Epoxy resin	25068-38-6		0.077	mg	636364	4053
								supplier	tape	Polypropylene	9003-07-0		0.002	mg	16529	105
								supplier	tape	epoxy resin	29690-82-2		0.012	mg	99174	632
				supplier	tape	Propenocate polymer	538311-13-6		0.024	mg	198347	1263				
				supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.006	mg	49587	316				
Bonding wire	M-008 Precious metals	0.078	mg	supplier	wire	Gold(Au)	7440-57-5		0.077	mg	987179	4053				
				supplier	wire	Palladium(Pd)	7440-05-3		0.001	mg	12821	53				
encapsulation	M-015 Other organic materials	11.017	mg	supplier	mold compound	Silica vitreous	60676-86-0		9.534	mg	865390	501789				
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.441	mg	40029	23211				
				supplier	mold compound	Phenol resin	26834-02-6		0.441	mg	40029	23211				
				supplier	mold compound	Epoxeye bisphenol A resin	25068-38-6		0.331	mg	30044	17421				
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.220	mg	19969	11579				
				supplier	mold compound	Carbon black	1333-86-4		0.050	mg	4638	2632				