



Materials Declaration Form

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

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-01-27
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 *	Legal Declaration *
true	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
	F53N*MV55CDA	B	MA1A	2020-01-27
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 KR3DHTR-LIS331DLHTR-NT331DLHTR			

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			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.162	substrate	8526
Lead	0.170	die	8947
Lead-Borate Glass	0.282	die	14842

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	F53N*MV55CDA		19.0010		500002.0	1000053.0				
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	5.385	mg	supplier	die	Silicon(Si)	7440-21-3		4.975	mg	923863	261842				
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.019	mg	3528	1000				
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.003	mg	557	158				
				supplier	metallisation	Tungsten(W)	7440-33-7		0.002	mg	371	105				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.009	mg	1671	474				
				supplier	passivation	Silicon Oxide	7631-86-9		0.067	mg	12442	3526				
				supplier	JIG-R & California 65	glass	Lead-Borate Glass	65997-18-4	7c-I-Electrical and elect	0.282	mg	52368	14842			
				supplier	polymer coating	PIX1 Gamma-butyrolactone	96-48-0		0.028	mg	5200	1474				
				Substrate	M-015 Other organic materials	2.646	mg	supplier	laminate	Fiber glass	65997-17-3		0.752	mg	284203	39579
								supplier	laminate	Bismaleimide polymer	105391-33-1		0.252	mg	95238	13263
supplier	laminate	Triazine (T)	25722-66-1						0.252	mg	95238	13263				
supplier	laminate	Thermosetting resin	54208-63-8						0.422	mg	159486	22211				
supplier	laminate	Aluminium hydroxide	21645-51-2						0.017	mg	6425	895				
supplier	laminate	Calcium sulfate	7778-18-9						0.009	mg	3401	474				
supplier	laminate	Zinc hydroxide	20427-58-1						0.005	mg	1890	263				
supplier	laminate	Barium sulfate	7727-43-7						0.197	mg	74452	10368				
supplier	laminate	Bisphenol F type epoxy resin	9003-36-5						0.179	mg	67649	9421				
supplier	laminate	polymerized Biphenyl resin	85954-11-6						0.074	mg	27967	3895				
supplier	laminate	Talc containing no asbestiform fibers	14807-96-6						0.049	mg	18519	2579				
supplier	laminate	Methoxymethylethoxy propanol	34590-94-8						0.043	mg	16251	2263				
supplier	laminate	Amorphous silica	7631-86-9						0.037	mg	13983	1947				
supplier	SVHC	Morpholine derivative	119313-12-1						0.031	mg	11716	1632				
supplier	laminate	Naphta	64742-94-5						0.006	mg	2268	316				
supplier	M-004 Copper and its alloys	metallisation	Copper(Cu)					7440-50-8		0.130	mg	49131	6842			
supplier	M-006 Nickel and its alloys	metallisation	Nickel(Ni)					7440-02-0		0.162	mg	61224	8526			
supplier	M-008 Precious metals	metallisation	Gold(Au)					7440-57-5		0.029	mg	10960	1526			
Die attach	M-015 Other organic materials	0.275	mg					supplier	tape	Epoxy resin	25068-38-6		0.173	mg	629091	9105
								supplier	tape	Polypropylene	9003-07-0		0.006	mg	21818	316
				supplier	tape	epoxy resin	29690-82-2		0.027	mg	98182	1421				
				supplier	tape	Propenoate polymer	538311-13-6		0.055	mg	200000	2895				
				supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.014	mg	50909	737				
Bonding wire	M-008 Precious metals	0.112	mg	supplier	wire	Gold(Au)	7440-57-5		0.111	mg	991071	5842				
				supplier	wire	Palladium(Pd)	7440-05-3		0.001	mg	8929	53				
encapsulation	M-015 Other organic materials	10.583	mg	supplier	mold compound	Silica vitreous	60676-86-0		9.159	mg	865445	482053				
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.423	mg	39970	22263				
				supplier	mold compound	Phenol resin	26834-02-6		0.423	mg	39970	22263				
				supplier	mold compound	Epoxyde bisphenol A resin	25068-38-6		0.318	mg	30048	16737				
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.212	mg	20032	11158				
supplier	mold compound	Carbon black	1333-86-4		0.048	mg	4536	2526								