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 ***	2019-09-18
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		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 MD 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		

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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 omprehensive 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.

Signature Not
Verified
Digitally signed by
Floriana San Biagio
Date: 2019.09.18
18:34:44 +02:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
	N7AA*MY1JAHA	A	997G	2019-09-18
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	53.54	mg	Each	ECOPACK® 2
,	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		

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		

Package Designator	**Size**	**Nbr of instances**	**Shape**	
LGA	3.3X3.3X2.9	4	flat	
Comment	B0AF CERAMIC CCLGA3.3X3.3X2.9 4L L1X1; MDF is valid for LPS33KTR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	**Response**
1 - Product(s) meets EU RoHS requirement without any exemptions	**TRUE**
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)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE

Exemption Id.	**Description**

QueryList : ELV directive : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	**Response**
1 - Product(s) meets EU ELV requirements without any exemptions	**TRUE**
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE

Exemption Id.	**Description**

QueryList : REACH-16th July 2019	
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						**Mfr Item Name**	**N7AA*MY1JAHA**				7999997.0	1000037.0
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	1.096	mg	supplier	die	Silicon(Si)	7440-21-3		1.032	mg	941606	19275
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.010	mg	9124	187
				supplier	metallisation	Copper(Cu)	7440-50-8		0.011	mg	10036	205
				supplier	metallisation	Tantalum(Ta)	7440-32-6		0.003	mg	2737	56
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.004	mg	3650	75
				supplier	metallisation	Tungsten(W)	7440-33-7		0.001	mg	912	19
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.007	mg	6387	131
				supplier	passivation	Silicon oxide	7631-86-9		0.028	mg	25547	523
Die attach 1	M-015 Other organic materials	0.989	mg	supplier	tape	Acrylic resin	538311-13-6		0.198	mg	200202	3698
				supplier	tape	Epoxy rexin C	9003-35-4		0.218	mg	220425	4072
				supplier	tape	Epoxy rexin D	120206-26-0		0.218	mg	220425	4072
				supplier	tape	Epoxy rexin E	25068-38-6		0.148	mg	149646	2764
				supplier	tape	Polyester resin	Proprietary		0.049	mg	49545	915
				supplier	tape	Silica	7631-86-9		0.148	mg	149646	2764
				supplier	tape	Additive	proprietary		0.010	mg	10111	187
Die attach 2	M-015 Other organic materials	0.760	mg	supplier	glue	Dimetyhl siloxane, dimethylvinylsiloxy- termin	68083-19-2		0.703	mg	925000	13130
				supplier	glue	Hexamethyldisilazane	68909-20-6		0.053	mg	69737	990
				supplier	glue	Dimethyl, Methylhydrogen siloxane, hydrogen	63148-57-2		0.004	mg	5263	75
Bonding wires	M-008 Precious metals	0.018	mg	supplier	wire	Gold (Au)	7440-57-5		0.018	mg	1000000	336
Cap Adhesive	M-015 Other organic materials	0.392	mg	supplier	glue	Silver (Ag)	7440-22-4		0.312	mg	795918	5827
				supplier	glue	bisphenol-F-(epichlorhydrin); epoxy resin (nur	9003-36-5		0.016	mg	40816	299
				supplier	glue	Epoxy Resin▯	Proprietary		0.016	mg	40816	299
				supplier	glue	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8		0.016	mg	40816	299
				supplier	glue	H412▯Poly[oxy(methyl-1,2-ethanediyl)], a-(2-ar	9046-10-0		0.016	mg	40816	299
				supplier	glue	4-Methyl-2-phenyl-1H-imidazole	827-43-0		0.016	mg	40816	299
Potting gel	M-015 Other organic materials	9.163	mg	supplier	resin	Rubber	Proprietary		7.239	mg	790025	135207
				supplier	resin	modified perfluoropolyether	241148-23-2		1.924	mg	209975	35936
Metal cap	M-015 Other organic materials	19.630	mg	supplier	cap	Iron (Fe)	7439-89-6		13.594	mg	692511	253904
				supplier	cap	Nickel (Ni)	7440-02-0		1.816	mg	92511	33919
				supplier	cap	Chromium (Cr)	7440-47-3		3.631	mg	184972	67818
				supplier	cap	Manganese (Mn)	7439-96-5		0.393	mg	20020	7340
				supplier	cap	Silicon (Si)	7440-21-3		0.147	mg	7489	2746
				supplier	cap	Nitrogen (N)	7727-37-9		0.020	mg	1019	374
				supplier	cap	Sulfur (S)	7704-34-9		0.006	mg	306	112
				supplier	cap	Phosphorus (P)	12185-10-3		0.009	mg	458	168
				supplier	cap	Carbon (C)	7440-44-0		0.014	mg	713	261
Ceramic base	M-015 Other organic materials	21.494	mg	supplier	ceramic	Aluminum oxide	1344-28-1		17.683	mg	822695	330276
				supplier	ceramic	Silicon Dioxide	7631-86-9		1.075	mg	50014	20078
				supplier	ceramic	Calcium Oxide	135-78-8		0.129	mg	6002	2409
				supplier	ceramic	Magnesium Oxide	130948-4		0.107	mg	4978	1999
				supplier	ceramic	Titanium oxide	13463-67-7		0.215	mg	10003	4016
				supplier	ceramic	Chromium Oxide	1308-38-9		0.645	mg	30008	12047
				supplier	ceramic	Tungsten (W)	7440-33-7		1.290	mg	60017	24094
				supplier	ceramic	Molybdenum (Mo)	7439-98-7		0.215	mg	10003	4016
				supplier	ceramic	Nickel (Ni)	7440-02-0		0.086	mg	4001	1606
				supplier	ceramic	Phosphorus (P)	12185-10-3		0.004	mg	186	75
				supplier	ceramic	Palladium (Pd)	7440-05-3		0.002	mg	93	37
				supplier	ceramic	Gold (Au)	7440-57-5		0.043	mg	2001	803