



## Material declaration form

General information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		*: Required Field

Supplier information			
Company name*	STMicroelectronics	Response date*	2023-06-14
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 : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

### Uncertainty statement

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### Legal statement

Supplier acceptance *	Legal declaration*	Standard
true		
<p>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.</p>		



Product				
Manufacturing item number	Manufacturing item name	Version	Manufacturing site	Date
	77AA*MV9FABD	A	P1C7	2023-06-14
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	13.2	mg	Each	ECOPACK® 2

Manufacturing information			
J-STD-020 MSL rating	Classification temperature	Number of reflow cycles	
1	260	3	
Bulk solder termination	Terminal plating	Terminal base alloy	Comment
Not Applicable	Nickel/Gold (Ni/Au), electrolytic	Copper Alloy	0



QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		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. piezoelectric devices, or in a glass or ceramic matrix compound	

QueryList : California Prop65 list, dated 27th Jan 2023			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	0.095	substrate	7197
Lead	0.170	die (Pb content in Lead-Borate Glass)	12879
Lead-Borate Glass	0.282	die	21364
Lead Zirconate Titanate (PZT)	0.000		0
Antimony trioxide	0.000		0
Bisphenol A	0.000		0
Gallium Arsenide	0.000		0

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014					Response
1 - Product(s) requires marking for the presence of restricted substances and must be marked with an Environmental Protection Use Period under China's Measures for Administration of the control of pollution by Electronic Information Products					false
2 - Product(s) is eligible for marking with the e code under China's Measures for Administration of the control of pollution by Electronic Information Products					false
Hazardous substance					
Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Hexavalent Chromium (Cr VI)	PBB & PBDE	
X	O	O	O	O	
Dies					
is Homogeneous Material containing Lead					

QueryList : REACH-17th Jan 2023					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	
'	0				
'	0				
'	0				
'	0				
'	0				
'	0				
'	0				
'	0				
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	
'	0				
'	0				
'	0				
'	0				
'	0				
'	0				
'	0				

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update		Response
The Product does contain at least one of the substances listed in Chemical Control Act		false




QueryList : Responsible metals sourcing	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true

QueryList : China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020	Response
The product contains adhesives identified under GB 33372	false

QueryList:Stockholm Convention Persistent Organic Pollutants	Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I	true



Material composition declaration : note : Substance present with less 0.001mg will not be declared in this document						Manufacturing item name	77AA*MV9FABD		13.2010		4999999.0	1000081.0	
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)	
Dies	M-011 Other inorganic materials	6.064	mg	supplier	die	Silicon(Si)	7440-21-3		5.632	mg	928760	426667	
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.017	mg	2803	1288	
				supplier	metallisation	Copper(Cu)	7440-50-8		0.020	mg	3298	1515	
				supplier	metallisation	Cobalt(Co)	7440-48-4		0.012	mg	1979	909	
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.004	mg	660	303	
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.006	mg	989	455	
				supplier	metallisation	Tungsten(W)	7440-33-7		0.002	mg	330	152	
				supplier	metallisation	Zirconium(Zr)	7440-67-7		0.002	mg	330	152	
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.010	mg	1649	758	
				supplier	passivation	Silicon Oxide	7631-86-9		0.077	mg	12698	5833	
				JIG-R & California 65	glass	Lead-Borate Glass	65997-18-4	7c-I-Electrical and electron	0.282	mg	46504	21364	
				supplier	laminare	Fiber glass	65997-17-3		0.393	mg	145126	29773	
				Substrate	M-015 Other organic materials	2.708	mg	supplier	laminare	Bisphenol F type epoxy resin	9003-36-5		0.219
supplier	laminare	Bismaleimide (B)	105391-33-1						0.133	mg	49114	10076	
supplier	laminare	Triazine (T)	25722-66-1						0.132	mg	48744	10000	
supplier	laminare	Aluminium hydroxide	21645-51-2						0.009	mg	3323	682	
supplier	laminare	Zinc hydroxide	20427-58-1						0.002	mg	739	152	
supplier	laminare	Calcium sulfate	7778-18-9						0.005	mg	1846	379	
SVHC	laminare	BPA	80-05-7						0.001	mg	369	76	
supplier	laminare	Acrylic resin	9003-01-4						0.163	mg	60192	12348	
supplier	laminare	Barium sulfate	7727-43-7						0.069	mg	25480	5227	
supplier	laminare	epoxy resin	85954-11-6						0.060	mg	22157	4545	
supplier	laminare	Talc	14807-96-6						0.041	mg	15140	3106	
supplier	laminare	Aromatic hydrocarbon	64742-94-5						0.018	mg	6647	1364	
supplier	laminare	Methoxymethylethoxy propanol	34590-94-8						0.046	mg	16987	3485	
supplier	laminare	Acetate compound	112-15-2						0.046	mg	16987	3485	
supplier	laminare	DPMA	88917-22-0						0.009	mg	3323	682	
supplier	laminare	Diphenyl-trimethylbenzoyl phosphine oxide	75980-60-8						0.007	mg	2585	530	
M-004 Copper and its alloys	supplier	laminare	Copper(Cu)					7440-50-8		1.243	mg	459010	94167
M-006 Nickel and its alloys	California 65	laminare	Nickel(Ni)					7440-02-0		0.095	mg	35081	7197
supplier	laminare	Gold(Au)	7440-57-5						0.017	mg	6278	1288	
Die attach	M-015 Other organic materials	0.294	mg					supplier	tape	Lintec-Tape-Polyolefin resin-IP	proprietary		0.173
				supplier	tape	LINTEC-TAPE-Epoxy acrylic resin-IP	Proprietary		0.018	mg	61224	1364	
				supplier	tape	epoxy resin	29690-82-2		0.021	mg	71429	1591	
				supplier	tape	Polyethylene terephthalate	25038-59-9		0.082	mg	278912	6212	
Bonding wire	M-008 Precious metals	0.064	mg	supplier	wire	Gold(Au)	7440-57-5		0.063	mg	984375	4773	
				supplier	wire	Palladium(Pd)	7440-05-3		0.001	mg	15625	76	
Encapsulation	M-015 Other organic materials	4.071	mg	supplier	mold compound	Solid Epoxy Resin	proprietary		0.204	mg	50111	15455	
				supplier	mold compound	Hardener	proprietary		0.204	mg	50111	15455	
				supplier	mold compound	Carbon Black	1333-86-4		0.041	mg	10071	3106	
				supplier	mold compound	Amorphous silica-1	7631-86-9		0.366	mg	89904	27727	
				supplier	mold compound	Amorphous silica-2	60676-86-0		3.256	mg	799803	246667	