



## Material declaration form

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

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2023-01-12
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*	giovanni giacopello	Representative title	ADGMaterial 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**

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

**Legal statement**

Supplier acceptance*	true	Legal declaration*	Standard
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	Manufacturing site	date
L99DZ380TR	PZOS*UR5DDAA	A	959	2023-01-12
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	650	mg	Each	ECOPACK® 2
<b>Identity</b>	<b>Authority</b>			
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 temperature	Number of reflow cycles	
3	260	3	
Bulk solder termination	Terminal plating	Terminal base alloy	Comment
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00935022



QueryList : RoHS Directive 2011/65/EU - 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		Response
<b>QUERY</b>		<b>Response</b>
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 : 2000/53/EC amended 2020/363_March 2020		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 : California Prop65 list, dated 25th Feb 2022			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	0.180	die	277

QueryList : REACH-10 Jun 2022				Response
<b>QUERY</b>				<b>Response</b>
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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in embedded article / Homogeneous material (mg)	Application - article / Homogeneous material	ppm in article /Homogeneous material

QueryList : Responsible metals sourcing		Response
<b>QUERY</b>		<b>Response</b>
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.		true
The following metals are present is the component :		<b>Cobalt, Tin, Tungsten,</b>
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .		

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

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

Stockholm Convention Persistent Organic Pollutants		Response
<b>QUERY</b>		<b>Response</b>
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						Mfr Item Name	PZOS*UR5DDAA					
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)
Die	M-011 Other inorganic materials	25.952	mg	supplier	die	Silicon(Si)	7440-21-3		23.509	mg	905866	36168
				supplier	metallisation	Copper(Cu)	7440-50-8		1.602	mg	61729	2465
				supplier	metallisation	Cobalt(Co)	7440-48-4		0.002	mg	77	3
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.180	mg	6936	277
				supplier	metallisation	Palladium(Pd)	7440-05-3		0.057	mg	2196	88
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.002	mg	77	3
				supplier	metallisation	Tungsten(W)	7440-33-7		0.074	mg	2851	114
				supplier	passivation	Silicon oxide	7631-86-9		0.256	mg	9864	394
				supplier	polymer coating	polyimide	proprietary		0.270	mg	10404	415
				Leadframe	M-004 Copper and its alloys	173.495	mg	supplier	alloy	Copper(Cu)	7440-50-8	
supplier	alloy	Iron(Fe)	7439-89-6						3.977	mg	22923	6118
supplier	alloy	Iron phosphide	1310-43-6						0.239	mg	1378	368
supplier	alloy	Zinc(Zn)	7440-66-6						0.208	mg	1199	320
supplier	glue	Silver(Ag)	7440-22-4						2.664	mg	891865	4098
Die attach	M-011 Other inorganic materials	2.987	mg	supplier	glue	Isobornyl Methacrylate	7534-94-3		0.224	mg	74991	345
				supplier	glue	Bismaleimide resin	35325-39-4		0.090	mg	30131	138
				supplier	glue	Epoxy-cyclohexylethyltrimethoxysilane	3388-04-3		0.009	mg	3013	14
Bonding wires	M-004 Copper and its alloys	5.148	mg	supplier	wire	Copper(Cu)	7440-50-8		5.148	mg	1000000	7920
Bonding wires 2	M-004 Copper and its alloys	4.266	mg	supplier	wire	Copper(Cu)	7440-50-8		4.266	mg	1000000	6563
Encapsulation	M-011 Other inorganic materials	328.386	mg	supplier	mold compound	Silica vitreous	60676-86-0		267.470	mg	814499	411492
				supplier	mold compound	Silicon oxide	7631-86-9		24.629	mg	75000	37891
				supplier	mold compound	Epoxy type resin	25068-38-6		24.629	mg	75000	37891
				supplier	mold compound	Phenol type resin	29690-82-2		9.852	mg	30001	15157
				supplier	mold compound	Carbon black	1333-86-4		1.806	mg	5500	2778
Connections coating	Solder	109.766	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		109.766	mg	1000000	168871