



## 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*	2023-05-25
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**

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**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
STPS200170TV1Y	B2DW*Z52PA1R	A	64BA	2023-05-25
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	27000.00	mg	Each	ECOPACK® 2
Identity	Authority			
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		
Not Applicable	Not Applicable	,		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	NA	Copper Alloy	DM00648861	
Package designator	Package size	Number of instances	Shape	
Not Applicable	38.00x8.00x25.00	4	0	
Comment	ISOT4D-DBC-RA-VIS			



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	
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020		Response
1 - Product(s) meets EU ELV requirements without any exemptions		false
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)		true
Exemption Id.	Description	
8(e)	8(e) - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	

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	1074.782	Die - Leadframe - insulator - Nut - Connection isotop - Connection	39807
Lead	216.623	soft solder	8023

QueryList : REACH-17 Jan 2023				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
Lead	1000 ppm	433.25	Soft solder, Soft solder 2	16046
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				false
CategoryLevel_Name	CategoryLevel_Threshold	Amount in embedded article / Homogeneous material (mg)	Application - article / Homogeneous material	ppm in article /Homogeneous material
Lead	1000 ppm	199.13	Soft solder	934996

QueryList : Responsible metals sourcing		Response
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 :		Gold, Tin, Tungsten,

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 : 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

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						Mfr Item Name	BZDW/Z52PA1R					
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	106.930	mg	supplier	die	Silicon(Si)	7440-21-3		103.575	mg	968625	3838
				supplier	metallisation	Aluminium(AI)	7429-90-5		0.643	mg	6013	24
				supplier	metallisation	Gold(Au)	7440-57-5		0.611	mg	5714	23
				supplier	metallisation	Nickel(Ni)	7440-02-0		1.172	mg	10960	43
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.145	mg	1356	5
				supplier	metallisation	Tungsten(W)	7440-33-7		0.153	mg	1431	6
				supplier	passivation	Silicon oxide	7631-86-9		0.631	mg	5901	23
Leadframe	M-004 Copper and its alloys	8266.763	mg	supplier	alloy	Copper (Cu)	7440-50-8		8249.560	mg	997919	305539
				supplier	alloy	Phosphorus (P)	12185-10-3		8.893	mg	1076	329
				supplier	metallization	Nickel (Ni)	7440-02-0		8.310	mg	1005	308
Soft solder	Solder	212.971	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temperat	199.127	mg	934996	7375
				supplier	solder	Tin(Sn)	7440-31-5		10.649	mg	50002	394
				supplier	solder	Silver(Ag)	7440-22-4		3.195	mg	15002	118
Soft solder 2	Solder	18.713	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temperat	17.496	mg	934965	648
				supplier	solder	Tin(Sn)	7440-31-5		0.936	mg	50019	35
				supplier	solder	Silver(Ag)	7440-22-4		0.281	mg	15016	10
Bonding wires	M-003 Aluminum and its alloys	29.551	mg	supplier	wire	Aluminium (Al)	7429-90-5		29.551	mg	1000000	1094
Encapsulation	M-011 Other inorganic materials	5044.427	mg	supplier	mold compound	Silica vitreous	60676-86-0		3531.099	mg	700000	130781
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		781.886	mg	155000	28959
				supplier	mold compound	Quartz	14808-60-7		252.221	mg	50000	9342
				supplier	mold compound	Phenol resin	9003-35-4		302.666	mg	60000	11210
				supplier	mold compound	Metal hydroxide	proprietary		151.333	mg	30000	5605
Connections coating	Solder	107.613	mg	supplier	mold compound	Carbon black	1333-86-4		25.222	mg	5000	934
Connection	M-004 Copper and its alloys	4599.883	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		107.613	mg	1000000	3986
				supplier	alloy	Copper(Cu)	7440-50-8		4598.783	mg	999761	170325
				supplier	metallization	Nickel(Ni)	7440-02-0		1.032	mg	224	38
Nut	M-006 Nickel and its alloys	1061.980	mg	supplier	metallization	Phosphorous(P)	7723-14-0		0.068	mg	15	3
				supplier	alloy	Nickel(Ni)	7440-02-0		1061.980	mg	1000000	39333
				supplier	alloy	Iron (Fe)	7439-89-6		7360.556	mg	1000000	272613
Screw	M-002 Other ferrous alloys, non-stainless steels	7360.556	mg	supplier	metallization	Nickel (Ni)	7440-02-0		2.288	mg	12003	85
				supplier	metallization	Phosphorus (P)	12185-10-3		0.172	mg	902	6
				supplier	ceramic	Manganese (Mn)	7439-96-5		7.433	mg	38995	275
				supplier	ceramic	Titanium (Ti)	7440-32-6		0.782	mg	4103	29
				supplier	ceramic	Molybdenum oxide	1313-27-5		9.531	mg	50002	353
Insulator	M-010 Ceramics / glass	190.613	mg	supplier	ceramic	Alumina (Al2O3)	1344-28-1		170.407	mg	893995	6311