



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*	2024-07-29
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*	Antonella Lanzafame	Representative title	AMSMaterial 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*	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
TS3121ICT	ZS1A	A	ZS1A	2024-07-29
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	6	mg	Each	ECOPACK® 3
Identity	Authority			
Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony			

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/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		0

Package designator	Package size	Number of instances	Shape	
SOT	1.25 x 2	5	0	
Comment				
Comment	W8 SOT 323 5LDS			

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		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 29th December 2023				Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen				TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen				FALSE
Substance	amount in product (mg)	Application	ppm in product	
Nickel	0.026	alloy	4333	

QueryList :Customer		Response
QUERY		Response

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014					Response
QUERY					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	
0	0	0	0	0	

QueryList : REACH-27th June 2024					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	
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
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

QueryList : EUSRR Directive	Response
Product contains hazardous materials listed in EUSRR Annex II	False

PFAS/PTFE Declaration	Response
QUERY	Response
The product is containing at least one of the following PFAS substance: Polytetrafluoroethylene,Thiophenium, Triphenylsulfonium nonaflate, Trifluoroacetic anhydride	False

BPA Declaration	Response
Product does not contain Bisphenol A (Isopropylidenediphenol)	True

Montreal Protocol	Response
Product does not contain Ozone Depleting Substances based on Annex I to Annex VII of EU REGULATION (EC) No 1005/2009	True

Environmental Protection Agency:Toxic Substances Control Act (TSCA). Section 6(h)	Response
Product does not contain Phenol, isopropylated, phosphate (3:1)	True



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	ZS1A		6.0001		4999881.0	1000020.0
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)
Die	M-011 Other inorganic materials	0.368	mg	supplier	die	Silicon(Si)	7440-21-3		0.348	mg	945652	58000
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.004	mg	10870	667
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	2717	167
				supplier	metallisation	Tungsten(W)	7440-33-7		0.004	mg	10870	667
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	2717	167
				supplier	passivation	Silicon oxide	7631-86-9		0.010	mg	27174	1667
Leadframe	M-004 Copper and its alloys	2.590	mg	supplier	alloy	Copper (Min 97%)	7440-50-8		2.505	mg	967069	417500
				supplier	alloy	Zinc (0.05-0.2%)	7440-66-6		0.001	mg	386	167
				supplier	alloy	Iron (2.1-2.6%)	7439-89-6		0.054	mg	20847	9000
				supplier	alloy	Nickel plating (1.0-1.2%)	7440-02-0		0.026	mg	10037	4333
				supplier	alloy	Palladium (0.1-0.15%)	2023568		0.003	mg	1158	500
				supplier	alloy	Gold (0.02-0.03%)	7440-57-5		0.001	mg	386	167
Die attach	M-011 Other inorganic materials	0.020	mg	supplier	glue	Aluminium oxide (30-60%)	1344-28-1		0.010	mg	497512	1667
				supplier	glue	Ethyl acetate (10-30%)	112-15-2		0.004	mg	199005	667
				supplier	glue	Epoxy resin (10-30%)	Proprietary		0.004	mg	199005	667
				supplier	glue	Bisphenol A (epichlorhydrin), epoxy resin (1-10%)	25068-38-6		0.001	mg	49751	167
				supplier	glue	Aromatic polyamine (1-10%)	proprietary		0.001	mg	49751	167
				supplier	glue	Aminopropyltriethoxysilane (0.1-1%)	919-30-2		0.0001	mg	4975	17
Bonding wires	M-008 Precious metals	0.030	mg	supplier	wire	Au	7440-57-5		0.030	mg	1000000	5000
Encapsulation	M-011 Other inorganic materials	2.992	mg	supplier	mold compound	Solid Epoxy Resin-1 (0.1-11%)	Proprietary		0.045	mg	15040	7500
				supplier	mold compound	Solid Epoxy Resin-2 (0.1-11%)	Proprietary		0.045	mg	15040	7500
				supplier	mold compound	Phenol resin (2-12%)	Proprietary		0.091	mg	30414	15167
				supplier	mold compound	Amorphous Silica (85-95%)	60676-86-0		2.750	mg	919118	458333
				supplier	mold compound	Carbon Black (<1%)	1333-86-4		0.011	mg	3676	1833
				supplier	mold compound	Crystalline silica (less than 5%)	14808-60-7		0.050	mg	16711	8333