



## 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*	2024-07-23
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 : <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
TS3121ILT	ZS1A	A	ZS1A	2024-07-23
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	16.380	mg	Each	ECOPACK® 3
<b>Identity</b>	<b>Authority</b>			
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	1.9 x 2.6	0	0	
Comment				
Comment	WY SOT 23-5; MD valid also for CP:TS3121AILT			

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				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	0.090	alloy	5495	

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	
	0				
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	
	0				



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, 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
<b>QUERY</b>	<b>Response</b>
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	16.3800		5000002.0	999998.0	
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	21245
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.004	mg	10870	244
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	2717	61
				supplier	metallisation	Tungsten(W)	7440-33-7		0.004	mg	10870	244
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	2717	61
				supplier	passivation	Silicon oxide	7631-86-9		0.010	mg	27174	611
Leadframe	M-004 Copper and its alloys	7.497	mg	supplier	alloy	Copper (Cu)	7440-50-8		7.227	mg	963986	441209
				supplier	alloy	Zinc (Zn)	7440-66-6		0.007	mg	934	427
				supplier	alloy	Iron (Fe)	7439-89-6		0.162	mg	21609	9890
				supplier	alloy	Phosphorus (P)	7723-14-0		0.005	mg	667	305
				supplier	alloy	Nickel (Ni)	7440-02-0		0.090	mg	12005	5495
Die attach	M-011 Other inorganic materials			supplier	alloy	Palladium (Pd)	7440-05-3		0.004	mg	534	244
				supplier	alloy	Gold (Au)	7440-57-5		0.002	mg	267	122
				supplier	glue	Aluminium oxide	1344-28-1		0.061	mg	859155	3724
Die attach	M-011 Other inorganic materials	0.071	mg	supplier	glue	Ethyl acetate	112-15-2		0.007	mg	98592	427
				supplier	glue	Epoxy Resin	Proprietary		0.003	mg	42254	183
				supplier	wire	Gold (Au)	7440-57-5		0.083	mg	1000000	5067
Encapsulation	M-011 Other inorganic materials	8.361	mg	supplier	mold compound	Solid Epoxy Resin-1	Proprietary		0.163	mg	19495	9951
				supplier	mold compound	Solid Epoxy Resin-2	Proprietary		0.163	mg	19495	9951
				supplier	mold compound	Phenol resin	Proprietary		0.320	mg	38273	19536
				supplier	mold compound	Amorphous Silica	60676-86-0		7.472	mg	893673	456166
				supplier	mold compound	Carbon Black	1333-86-4		0.040	mg	4784	2442
supplier	mold compound	Crystalline silica	14808-60-7		0.203	mg	24279	12393				