



## 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*	2023-09-11
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
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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
TSC1641IQT	AYWQ*UBFSBA5	A	Z6HA SC	2023-09-11
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	21.00	mg	Each	ECOPACK® 3

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	,

Package designator	Package size	Number of instances	Shape	
qfn	3 x 3	10	Flat	
Comment				
Comment	WQ VDFPN 3x3x1.0 10 PITCH 0.50			



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 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	0.090	alloy	4286

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	
O	O	O	O	O	

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
,	#N/A			
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
,	#N/A		,	

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



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	AYWQ*UBFSBA5		21.0000		5000003.0	999999.0
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	2.456	mg	supplier	die	Silicon(Si)	7440-21-3		2.317	mg	943404	110333
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.032	mg	13029	1524
				supplier	metallisation	Copper(Cu)	7440-50-8		0.005	mg	2036	238
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.002	mg	814	95
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	1221	143
				supplier	passivation	Silicon oxide	7631-86-9		0.062	mg	25244	2952
				supplier	polymer coating	polyimide	proprietary		0.035	mg	14251	1667
Leadframe	M-004 Copper and its alloys	7.497	mg	supplier	alloy	Copper (Cu)	7440-50-8		7.227	mg	963986	344143
				supplier	alloy	Zinc (Zn)	7440-66-6		0.007	mg	934	333
				supplier	alloy	Iron (Fe)	7439-89-6		0.162	mg	21609	7714
				supplier	alloy	Phosphorus (P)	7723-14-0		0.005	mg	667	238
				supplier	alloy	Nickel (Ni)	7440-02-0		0.090	mg	12005	4286
				supplier	alloy	Palladium (Pd)	7440-05-3		0.004	mg	534	190
				supplier	alloy	Gold (Au)	7440-57-5		0.002	mg	267	95
Die attach		0.071	mg	supplier	to be defined	Aluminium oxide	1344-28-1		0.061	mg	859155	2905
				supplier	to be defined	Ethyl acetate	112-15-2		0.007	mg	98592	333
				supplier	to be defined	Epoxy Resin	Proprietary		0.003	mg	42254	143
Bonding wires	M-008 Precious metals	0.083	mg	supplier	wire	Gold (Au)	7440-57-5		0.083	mg	1000000	3952
Encapsulation	M-011 Other inorganic materials	10.893	mg	supplier	mold compound	Solid Epoxy Resin-1	Proprietary		0.163	mg	14964	7762
				supplier	mold compound	Solid Epoxy Resin-2	Proprietary		0.163	mg	14964	7762
				supplier	mold compound	Phenol resin	Proprietary		0.320	mg	29377	15238
				supplier	mold compound	Amorphous Silica	60676-86-0		9.944	mg	912880	473524
				supplier	mold compound	Carbon Black	1333-86-4		0.100	mg	9180	4762
				supplier	mold compound	Crystalline silica	14808-60-7		0.203	mg	18636	9667